

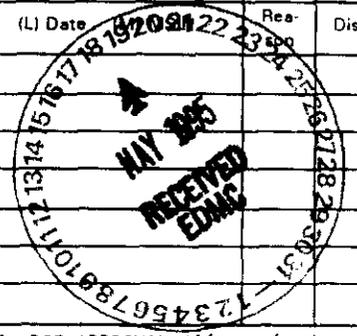
ENGINEERING DATA TRANSMITTAL

2. To: (Receiving Organization) Distribution	3. From: (Originating Organization) Characterization Plans and Reports	4. Related EDT No.: N/A
5. Proj. Proj. Dept. / iv Tank 241-U-202/Waste Management, CPR/Char. Eng.	6. Cog. Engr.: Jaiduk Jo	7. Purchase Order No.: N/A
8. Originator Remarks: This document is being released into the Supporting Document System for retrievability purposes.		9. Equip./Component No.: N/A
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		12. Major Assm. Dwg. No.: N/A
		13. Permit/Permit Application No.: N/A
		14. Required Response Date: 05/05/95

15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	WHC-SD-WM-DP-110	N/A	0	45-Day Safety Screen Results for Tank 241-U-202, Push Mode, Cores 75 and 78	Q	2	1	

16. KEY					
Approval Designator (F)		Reason for Transmittal (G)		Disposition (H) & (I)	
E, S, Q, D or N/A (see WHC-CM-3-5, Sec. 12.7)		1. Approval	4. Review	1. Approved	4. Reviewed no/comment
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2	1	Cog. Mgr.	J.G. Kristofzski	<i>J.G. Kristofzski</i>	5/5/95	TG-20	<i>J.G. Kristofzski</i>	5/10/95			
2	1	QA	W.A. Hendricksen	<i>W.A. Hendricksen</i>	5/10/95	TG-20	<i>W.A. Hendricksen</i>	5/10/95			
			Safety								
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18. A.E. Young <i>A.E. Young</i> Signature of EDT Originator Date: 5-5-95	19. _____ Authorized Representative Date for Receiving Organization	20. <i>John Kristofzski</i> J.G. Kristofzski Cognizant Manager Date: 5/5/95	21. DOE APPROVAL (if required) Ctrl. No. <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comments
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RELEASE AUTHORIZATION

Document Number: WHC-SD-WM-DP-110, REV 0

Document Title: 45-Day Safety Screen Results for Tank 241-U-202, Push Mode, Cores 75 and 78

Release Date: 5/10/95

This document was reviewed following the procedures described in WHC-CM-3-4 and is:

APPROVED FOR PUBLIC RELEASE

WHC Information Release Administration Specialist:


Kara M. Broz

May 10, 1995

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SUPPORTING DOCUMENT

1. Total Pages *109*

2. Title

45-Day Safety Screen Results for Tank 241-U-202, Push Mode, Cores 75 and 78

3. Number

WHC-SD-WM-DP-110

4. Rev No.

0

5. Key Words

45-Day Safety Screen Results, Safety Screen Results, Safety Screen, Tank 241-U-202, Tank U-202, U-202, Push Mode, Core 75, Core 78

6. Author

Name: Jaiduk Jo

Signature

Jaiduk Jo

Organization/Charge Code 8E480/MDR21

7. Abstract

N/A

8. RELEASE STAMP

<p>OFFICIAL RELEASE BY WHC DATE <i>10/10/97</i> <i>JE</i> <i>Stas</i></p>
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P.O. Box 1970 Richland, WA 99352

WHC-SD-WM-DP-110, REV. 0

ANALYTICAL SERVICES

**45-DAY SAFETY SCREEN RESULTS FOR TANK 241-U-202,
PUSH MODE, CORES 75 AND 78**

DATED:

MAY 5, 1995

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WHC-SD-WM-DP-110, REV. 0

TABLE OF CONTENTS

Narrative 1

Sample Data Summary 5

Undigested Sample Analyses - Direct 11

 Differential Scanning Calorimetry(DSC)

 DSC Worklist # 1019 12

 DSC Worklist # 1020 19

 DSC Worklist # 1021 23

 DSC Worklist # 1022 27

 DSC Worklist # 1024 31

 DSC Worklist # 1025 36

 DSC Worklist # 1028 40

 DSC Worklist # 1029 46

 DSC Worklist # 1030 50

 Thermogravimetric Analyses (TGA)

 TGA Worklist # 1034 57

 TGA Worklist # 1035 63

 TGA Worklist # 1036 67

 TGA Worklist # 1047 74

 TGA Worklist # 1048 82

 TGA Worklist # 1050 86

 TGA Worklist # 1051 93

 TGA Worklist # 1052 97

 TGA Worklist # 1053 103

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Summary

Three two-segment core samples from tank U-202 were received at the 222-S Laboratories. Two core samples were analyzed and one core sample, first core from riser 6 (Sample 95-055 and Sample 95-056), was archived for future needs. These samples underwent safety screening analysis Differential Scanning Calorimetry (DSC), Thermogravimetric Analysis (TGA) and Alpha Total in accordance with reference (1) below. The test results indicate that no safety screening notification limits were exceeded.

Sample Receipt and Extrusion

Core 75, Segment 1, Sample 95-050 (Riser 2)

Sample 95-050 was collected from riser 2 of tank U-202 on 3/22/95, and received at the 222-S laboratory on 3/23/95. Extrusion took place on 4/3/95, with the total amount of solid material recovered being 119 grams and drainable liquid recovered being 155 grams. There was no liquid in the liner. The drainable liquid was yellow and the solid sample was light yellow with some black specks and large crystals. The first 3 inches of the solid sample retained the shape of the sampler. The final 2 inches "melted" on the extrusion tray. The solid material was damp and creamy. All archiving requirements per the TCP were performed on the unfiltered liquid and solid subsamples, while all analysis of the drainable liquid was run after settling the solids. Sub-samples were provided to the laboratory for analysis, and results appear in the summary table as sample numbers S95T000582, S95T000584 and S95T000585.

Core 75, Segment 2, Sample 95-051 (Riser 2)

Sample 95-051 was collected from riser 2 of tank U-202 on 3/22/95, and received at the 222-S laboratory on 3/23/95. Extrusion took place on 4/3/95, with the total amount of solid material recovered being 122 grams and drainable liquid recovered being 137 grams. There was nine grams of fluid in the liner. The drainable liquid was yellow and the solid sample was light yellow. The solid material was extruded near the last six inches of extrusion of which the final three inches of the solid material was a light yellow sludge material. All other solid material was crystalline. The solid sample was divided into crystalline half segment and sludge half segment. All archiving requirements per the TCP were performed on the unfiltered liquid and solid subsamples, while all analysis of the drainable liquid was run after settling the solids. The liner liquid was not analyzed due to insufficient amount of sample. Sub-samples were provided to the laboratory for analysis, and results appear in the summary table as sample numbers S95T000588, S95T000590, S95T000591, S95T000598, and S95T000599.

WHC-SD-WM-DP-110, REV. 0

Core 78, Segment 1, Sample 95-057 (Riser 6)

Sample 95-057 was collected from riser 6 of tank U-202 on 3/29/95, and received at the 222-S laboratory on 3/30/95. Extrusion took place on 4/4/95, with the total amount of solid material recovered being 312 grams, drainable liquid recovered being 42 grams, and no liner fluid was found. The drainable liquid was yellow and the solid sample was light yellow. The first six inches of extrusion was light yellow soft sludge, followed by a 3 inch gap which contained drainable liquid, and the last six inches was yellow sludge. The sludge contained black specks on the surface, but no crystals were observed. The solid sample was divided into a upper half segment and a lower half segment. All archiving requirements per the TCP were performed on the unfiltered liquid and solid subsamples, while all analysis of the drainable liquid was run after settling the solids. Sub-samples were provided to the laboratory for analysis, and results appear in the summary table as sample numbers S95T000621, S95T000630, S95T000632, S95T000633, and S95T000634.

Core 78, Segment 2, Sample 95-058 (Riser 6)

Sample 95-058 was collected from riser 6 of tank U-202 on 3/29/95, and received at the 222-S laboratory on 3/30/95. Extrusion took place on 4/4/95, with the total amount of solid material recovered being 184 grams, drainable liquid recovered being 19 grams, and no liner fluid was found. The drainable liquid was yellow and the solid sample was light yellow. The last eight inches of extrusion was solid of which the first four inches were light yellow crystals and the last four inches were light yellow sludge. The solid sample was divided into a upper half segment and a lower half segment. All archiving requirements per the TCP were performed on the unfiltered liquid and solid subsamples, while all analysis of the drainable liquid was run after settling the solid. Sub-samples were provided to the laboratory for analysis, and results appear in the summary table as sample numbers S95T000636, S95T000643, S95T000644, S95T000646, and S95T000650.

Core 78, Field Blank

Field Blank was collected for tank U-202 and U-201 on 3/30/95, and received at the 222-S laboratory on 3/30/95. Extrusion took place on 4/4/95, with the total amount of liquid recovered being 286 grams. The Field Blank was provided to the laboratory for analysis and results appear in the summary table as sample number S95T000654.

Analytical Results

TGA (Moisture)

The weight percent water by Thermogravimetric Analysis was performed using procedure LA-560-112, Rev. A-2 with a nitrogen purge. All results were above the notification limit (notification is made if the sample is analyzed at less than 17 percent water), therefore no notifications were made. All samples met the precision and accuracy criteria stated in reference (1) with an exception of samples S95T000590, S95T000630, and S95T000643. TGA precision between the sample and duplicate for samples S95T000590, S95T000630, and S95T000643

WHC-SD-WM-DP-110, REV. 0

exceeded the acceptance criteria, with Relative Percent Deviation (RPD) values of 12.0, 24.2, and 13.6, respectively. The sample result for S95T000590 was 43.64% water, the duplicate 38.71%. A third analysis was run with a result of 36.88%. This result does not appear on the table, but is included in the raw data. The sample result for S95T000630 was 24.11% water, the duplicate 18.90%. A third analysis was run with a result of 19.27%. This result does not appear on the table, but is included in the raw data.

The sample result for S95T000643 was 36.24% water, the duplicate 41.52%. A third analysis was run with a result of 34.81%. This result does not appear on the table, but is included in the raw data.

DSC

Differential thermal analyses were performed using procedure LA-514-113, Rev. B-1 and a Mettler Model 20 and LA-514-114, Rev. B-0 and a Perkin Elmer DSC-7 Differential Scanning Calorimetry under a nitrogen purge. All results were below the safety screen notification limit of 481 joules/g (dry), therefore no notifications were made. All samples met the precision and accuracy criteria stated in reference (1). No exotherms were observed in any of the samples.

Alpha Total

The Alpha Total analyses were performed using procedure LA-508-101, Rev. D-2. All alpha total results were below the notification limit. All samples (S95T000585, S95T000591, S95T000599, S95T000633, S95T000634, S95T000646, and S95T000650) exceeded the precision criteria. These samples demonstrated lower than normal spike recovery with values ranging from 50.8 to 89.6 percent recovery. Because sample alpha activities were approximately 3 orders of magnitude less than the action limit for total alpha, a rerun was not requested. The results appear in the summary table. The Tank Characterization Plan (TCP) accuracy criteria for the control standard was met in each case.

Reference: (1) WHC-SD-WM-TP-309, REV. 0, "Tank 241-U-202 Tank Characterization Plan," dated March 2, 1995, Westinghouse Hanford Company, Richland, WA 99352

WHC-SD-WM-OP-110, REV. 0

SAMPLE DATA SUMMARY

45 Day Safety Screen Results for 241-U-202
 U-202

CORE NUMBER: 75
 SEGMENT #: 1

SEGMENT PORTION: n/a

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S95T000585		F	Alpha of Digested Solid	uCi/g	-1.000	41.100	78.04	<6.35e-04	1.19e-03	1.07e-3	1.13e-03	10.6	64.40	1.00e-03		80.6

W Whole Segment: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S95T000584			% Water by TGA using Mettler	%	18.900	110.000	98.51	n/a	25.49	26.24	25.86	2.90	n/a	n/a		n/a
S95T000584			DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	431.100	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a		n/a
S95T000584			DSC Exotherm using Mettler	Joules/g	-1.000	431.100	94.55	n/a	0.00e+00	0	0.000	n/a	n/a	n/a		n/a

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S95T000582			% Water by TGA using Mettler	%	None	None	99.17	n/a	72.60	73.24	72.92	0.88	n/a	n/a		n/a
S95T000582			DSC Exotherm Dry Calculated	Joules/g Dry	None	None	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a		n/a
S95T000582			DSC Exotherm using Mettler	Joules/g	None	None	91.74	n/a	0.00e+00	0	0.000	n/a	n/a	n/a		n/a

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12/1/95

45 Day Safety Screen Results for 241-U-202
U-202

CORE NUMBER: 75
SEGMENT #: 2

SEGMENT PORTION: n/a

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S95T000588			% Water by TGA using Mettler	%	None	None	99.17	n/a	73.29	72.23	72.76	1.46	n/a	n/a	n/a	n/a
S95T000588			DSC Exotherm Dry Calculated	Joules/g Dry	None	None	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a
S95T000588			DSC Exotherm using Mettler	Joules/g	None	None	91.74	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a

U Upper Half of Segment: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S95T000598			% Water by TGA using Mettler	%	16.900	110.000	99.86	n/a	22.87	22.90	22.88	0.13	n/a	n/a	n/a	n/a
S95T000598			DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	431.100	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a
S95T000598			DSC Exotherm using Mettler	Joules/g	-1.000	431.100	95.61	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a
S95T000599	F		Alpha of Digested Solid	uCi/g	-1.000	41.100	78.04	<6.35e-04	<7.40e-4	<1.22e-3	n/a	n/a	53.80	2.00e-03	500.0	

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S95T000590			% Water by TGA using Mettler	%	16.900	110.000	98.51	n/a	43.64	38.71	41.17	12.0	n/a	n/a	n/a	n/a
S95T000590			DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	431.100	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a
S95T000590			DSC Exotherm using Mettler	Joules/g	-1.000	431.100	94.55	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a
S95T000591			Alpha of Digested Solid	uCi/g	1.000	41.100	82.43	<1.18e-03	<1.18e-3	<1.20e-3	n/a	n/a	79.70	3.00e-03	129.6	

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-----> Selected Limit

45 Day Safety Screen Results for 241-U-202
U-202

CORE NUMBER: 78
SEGMENT #: 1

SEGMENT PORTION: n/a

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S95T000621			% Water by TGA using Mettler	%	None	None	99.24	n/a	73.42	73.6	73.51	0.27	n/a	n/a	n/a	n/a
S95T000621			DSC Exotherm Dry Calculated	Joules/g Dry	None	None	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a
S95T000621			DSC Exotherm using Mettler	Joules/g	None	None	102.3	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a
S95T000630			% Water by TGA using Mettler	%	15.900	130.000	99.81	n/a	24.11	18.90	21.50	24.2	n/a	n/a	n/a	n/a
S95T000630			DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	481.100	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a
S95T000630			DSC Exotherm using Mettler	Joules/g	-1.000	481.100	111.4	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a
S95T000632			% Water by TGA using Mettler	%	16.900	130.000	99.43	n/a	24.45	22.24	23.34	9.47	n/a	n/a	n/a	n/a
S95T000632			DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	481.100	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a
S95T000632			DSC Exotherm using Mettler	Joules/g	-1.000	481.100	107.0	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a
S95T000633	F		Alpha of Digested Solid	uCi/g	-1.000	41.100	78.04	<6.90e-04	1.52e-03	<1.10e-3	n/a	n/a	53.20	2.00e-03	77.2	
S95T000634	F		Alpha of Digested Solid	uCi/g	-1.000	41.100	78.04	<6.90e-04	1.25e-03	<1.37e-3	n/a	n/a	50.80	2.00e-03	88.6	

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MHC-SD-WM-IDP-110, REV. 1.0

05-27-94

45 Day Safety Screen Results for 241-U-202
U-202

CORE NUMBER: 78
SEGMENT #: 2

SEGMENT PORTION: n/a

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S95T000636			% Water by TGA on Perkin Elmer	%	None	None	97.30	n/a	72.27	72.23	72.25	0.06	n/a	n/a	n/a
S95T000636			DSC Exotherm on Perkin Elmer	Joules/g	None	None	101.9	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000636			DSC Exotherm Dry Calculated	Joules/g Dry	None	None	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000643			% Water by TGA using Mettler	%	16.980	110.000	99.63	n/a	36.24	41.5	38.87	13.6	n/a	n/a	n/a
S95T000643			DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	481.100	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000643			DSC Exotherm using Mettler	Joules/g	-1.000	481.100	106.5	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000644			% Water by TGA using Mettler	%	16.980	110.000	98.67	n/a	24.43	23.96	24.20	1.94	n/a	n/a	n/a
S95T000644			DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	481.100	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000644			DSC Exotherm using Mettler	Joules/g	-1.000	481.100	110.4	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000646			Alpha of Digested Solid	uCi/g	-1.000	41.100	82.43	<1.18e-03	<1.18e-3	<1.16e-3	n/a	n/a	81.50	3.00e-03	500.0
S95T000650	F		Alpha of Digested Solid	uCi/g	-1.000	41.100	84.46	<2.49e-03	<5.32e-3	<4.71e-3	n/a	n/a	89.60	6.00e-03	375.3

=> Limit violated
Selected Limit

9

WHC-SD-WM-DP-110, REV. 1

45 Day Safety Screen Results for 241-U-202
U-202

CORE NUMBER: 78
SEGMENT #: FB

SEGMENT PORTION: n/a

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S95T000654			% Water by TGA on Perkin Elmer	%	None	None	97.30	n/a	99.66	99.52	99.59	0.14	n/a	n/a		n/a
S95T000654			DSC Exotherm on Perkin Elmer	Joules/g	None	None	101.9	n/a	0.00e+00	0	0.000	n/a	n/a	n/a		n/a
S95T000654			DSC Exotherm Dry Calculated	Joules/g Dry	None	None	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a		n/a

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WMC-SD-WM-OP-110, REV.0

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WHC-SD-WM-DP-110, REV. 0

UNDIGESTED ANALYSES RESULTS - DIRECT

LABCORE Data Entry Template for Worklist# 1019

Analyst: SAF Instrument: DSC01 Book # 12A74-17

Method: LA-514-113 Rev/Mod 1-1

Worklist Comment: Please run U-202 DSC under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	SOLID	28.45	26.9	N/A	Joules/g
95000039	U-202	2 SAMPLE	S95T000584	0		DSC-01	SOLID	N/A	Ø		Joules/g
95000039	U-202	3 DUP	S95T000584	0		DSC-01	SOLID	Ø	Ø	N/A	Joules/g
95000039	U-202	4 SAMPLE	S95T000590	0		DSC-01	SOLID	N/A	Ø		Joules/g
95000039	U-202	5 DUP	S95T000590	0		DSC-01	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 1019

Susie M. Dalton 4/25/95
Analyst Signature Date

[Signature] 4-25-95
Analyst Signature Date

Verified by Blandina Valenzuela 4/25/95

Data Entry Comments:

S95T000584 - right side of the sample is broken down into small pieces. Found 5 crystals

S95T000590 - right side of the sample liquid will large, clear crystals

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit. S = Worklist Slot Number, (274)
R = Replicate Number, A = Aliquot Code.

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SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 13 TO 18.

DSC STD 12N14-A

6.340 mg

Rate: 10.0 °C/min

File: 00016.001

DSC METTLER

23-Apr-95

Ident: 0.0

222-S Laboratory

exo >

13
10. mW

Integration
Delta H 170 mJ
26.9 J/g
Peak 158.7 °C
-12.0 mW

120.

140.

160.

180.

°C

James M. De (10)

WHC-SD-WM-DP-110, REV. 0

BEST AVAILABLE COPY

S95T000584 N2

27.075 mg

Rate: 10.0 °C/min

File: 00018.001

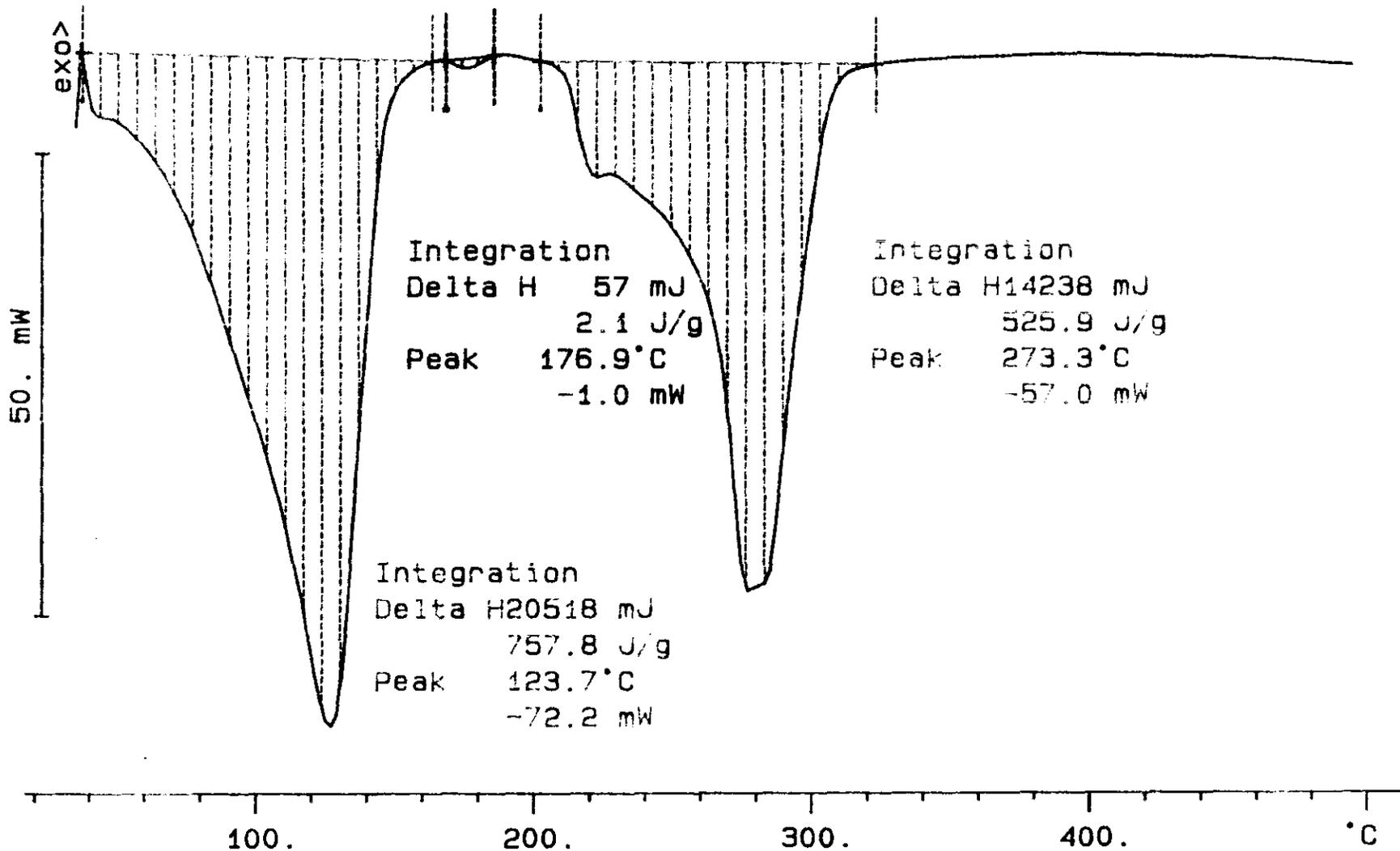
DSC METTLER

23-Apr-95

Ident: 0.0

222-S Laboratory

11



WHC-SD-WM-DP-110, REV. 10

BEST AVAILABLE COPY

S95T000584 (DUP) N2

19.175 mg

Rate: 10.0 °C/min

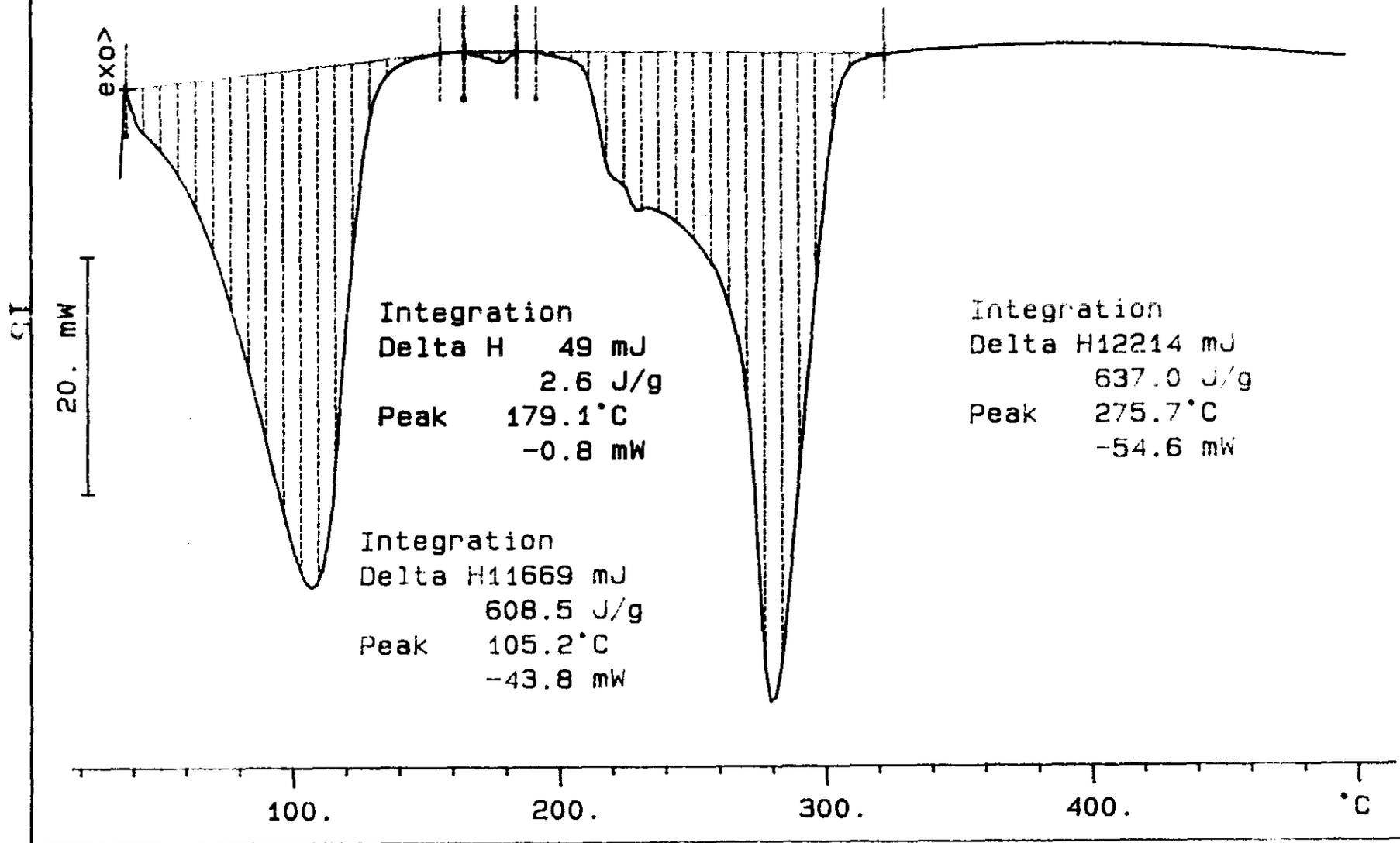
File: 00020.001

DSC METTLER

24-Apr-95

Ident: 0.0

222-S Laboratory



WMC-SD-WM-DP-110, REV. 0

BEST AVAILABLE COPY

S95T000584 (DUP2) N2

15.075 mg

Rate: 10.0 °C/min

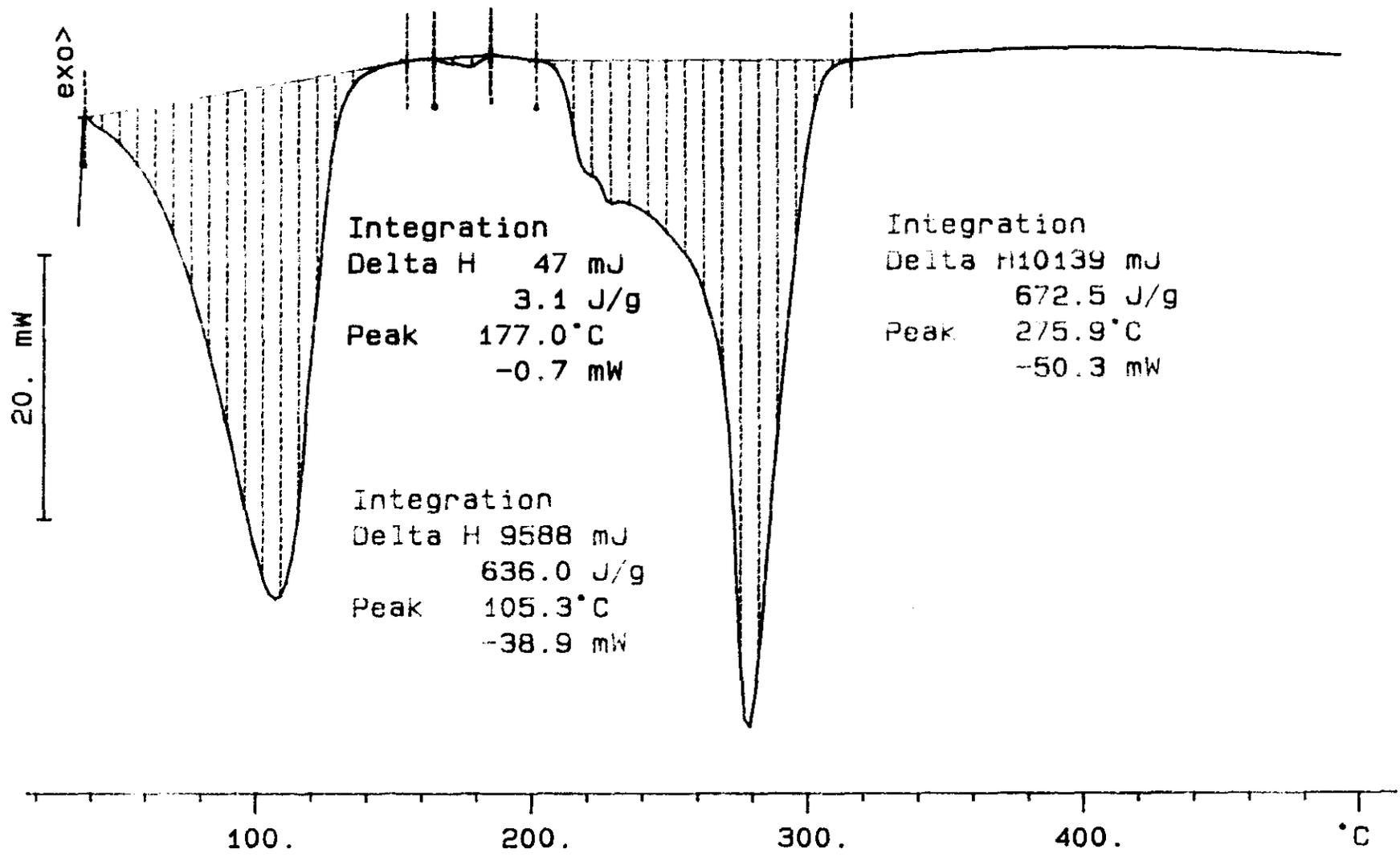
File: 00026.001

DSC METTLER

24-Apr-95

Ident: 0.0

222-S Laboratory



13

WHC-SD-WM-DP-110, REV. 008

BEST AVAILABLE COPY

S95T000590 N2

18.492 mg

Rate: 10.0 °C/min

File: 00022.001

DSC METTLER

24-Apr-95

Ident: 0.0

222-S Laboratory

EXO >

50. mW

Integration

Delta H 2514 mJ

136.0 J/g

Peak 280.5°C

-9.7 mW

Integration

Delta H 21689 mJ

1172.9 J/g

Peak 133.5°C

-77.3 mW

100.

200.

300.

400.

°C

WHC-SD-WM-DP-110, REV.0

BEST AVAILABLE COPY

S95T000590 (DUP) N2

23.844 mg

Rate: 10.0 °C/min

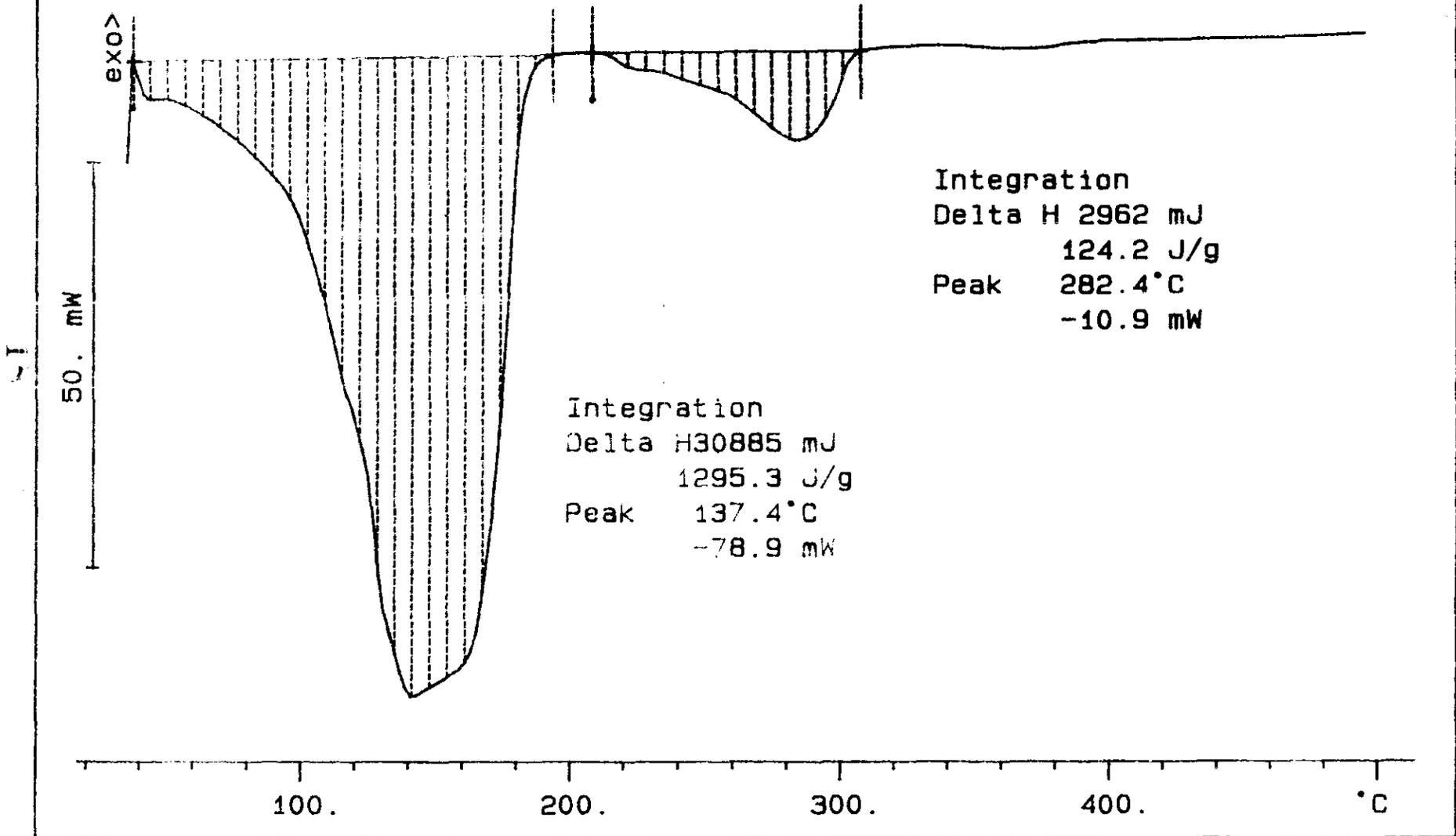
File: 00024.001

DSC METTLER

24-Apr-95

Ident: 0.0

222-S Laboratory



WMC-SD-WM-DP-110, REV. 0

LABCORE Data Entry Template for Worklist# 1020

Analyst: RDM Instrument: DSC01 Book # 12N14A

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: Please run U-202 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	28.45	27.2	N/A	Joules/g
95000039	U-202	2 SAMPLE	S95T000598	0	DSC-01	SOLID	N/A	∅		Joules/g
95000039	U-202	3 DUP	S95T000598	0	DSC-01	SOLID	∅	∅	N/A	Joules/g

Final page for worklist # 1020

RDM 5/1/95
Analyst Signature Date

[Signature] 5/1/95
Analyst Signature Date

Verified by Blandina Valenzuela 5/1/95

Data Entry Comments: S15T000518 produced three endotherms: one at 110.7°C with a delta H of 1118.5 J/g, second at 146.9°C with a delta H of 100.5 J/g, and the third at 273.4°C with a delta H of 44.6 J/g

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 20 TO 22.

BEST AVAILABLE COPY

DSC STD 12N14-A

6.590 mg

Rate: 10.0 °C/min

File: 00017.001

DSC METTLER

30-Apr-95

Ident: 0.0

222-S Laboratory

exo Δ

5. mW

Integration
Delta H 179 mJ
27.2 J/g
Peak 159.0 °C
-12.4 mW

120.

140.

160.

5/1/95 for 180. °C

RD Meyer's

Blandina Valenzuela

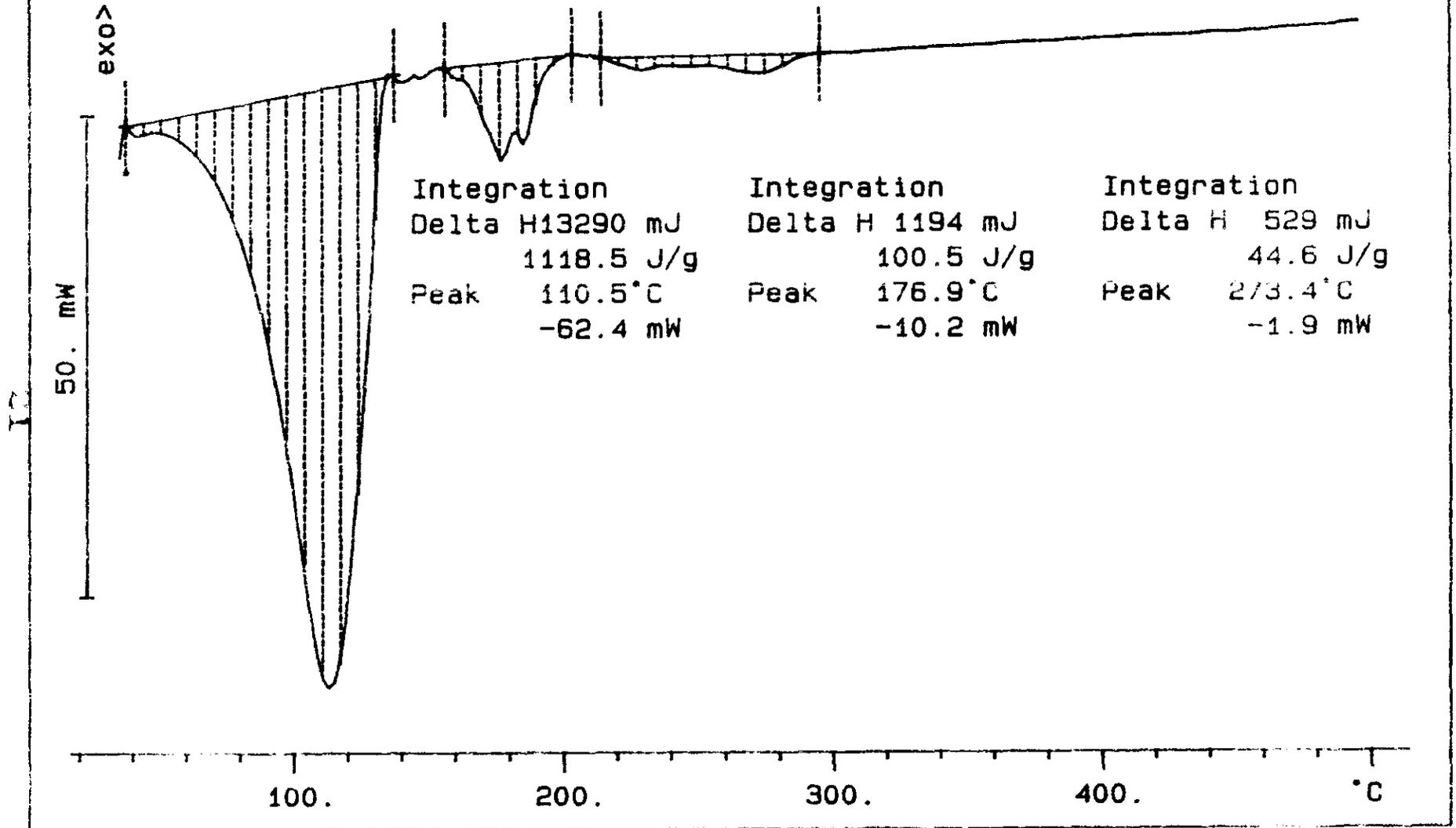
WHC-SD-WM-DP-1-0, REV. 0

BEST AVAILABLE COPY

S95T000598 N2
11.882 mg

Rate: 10.0 °C/min

File: 00018.001 DSC METTLER 30-Apr-95
Ident: 0.0 222-S Laboratory



WMC-SJ-WM-DP-110, REV. 0

BEST AVAILABLE COPY

S95T000598 (DUP) N2

14.435 mg

Rate: 10.0 °C/min

File: 00019.001

DSC METTLER

30-Apr-95

Ident: 0.0

222-S Laboratory

EXO >

20. mW

Integration
Delta H 14852 mJ
1028.9 J/g
Peak 108.5°C
-59.1 mW

Integration
Delta H 203 mJ
14.0 J/g
Peak 171.0°C
-2.1 mW

Integration
Delta H 6183 mJ
428.3 J/g
Peak 285.6°C
-24.4 mW

100.

200.

300.

400.

°C

WHC-SD-WM-DP-110-REV.0

LABCORE Data Entry Template for Worklist# 1021

Analyst: ADP Instrument: DSC01 Book # 12014-A

Method: LA-514-113 Rev/Mod B-1

Worklist Comment: Please run U-202 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC 01	SOLID	28.45	31.7	N/A	Joules/g
95000052	U-202	4 SAMPLE	S951000630	0	DSC 01	SOLID	N/A	∅		Joules/g
95000052	U-202	5 DUP	S951000630	0	DSC 01	SOLID	∅	∅	N/A	Joules/g

Final page for worklist # 1021

Anthony Perunich 5-2-95
Analyst Signature Date

[Signature] 5-3-95
Analyst Signature Date

Verified by Elandina Valenzuela 5-3-95

Data Entry Comments:

Sample was analyzed on 5/2/95. The sample was found to be 28.45 Joules/g with a 100% conversion. The sample was analyzed on 5/3/95 and found to be 31.7 Joules/g. The sample was analyzed on 5/3/95 and found to be 31.7 Joules/g.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT **BEST AVAILABLE COPY**
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 24 TO 26.

DSC STD12N14-A

6.340 mg

Rate: 10.0 °C/min

File: 00040.001

DSC METTLER 02-May-95

Ident: 0.0

222-S Laboratory

<OX>

10. mW

Integration

Delta H 201 mJ

31.7 J/g

Peak 158.7°C

-12.2 mW

Anthony Peruto 5-2-95

120.

140.

160.

180. °C

WHC-SD-WM-DP-110, REV. 0

BEST AVAILABLE COPY

DSC S95T000630 SAM

16.425 mg

Rate: 10.0 °C/min

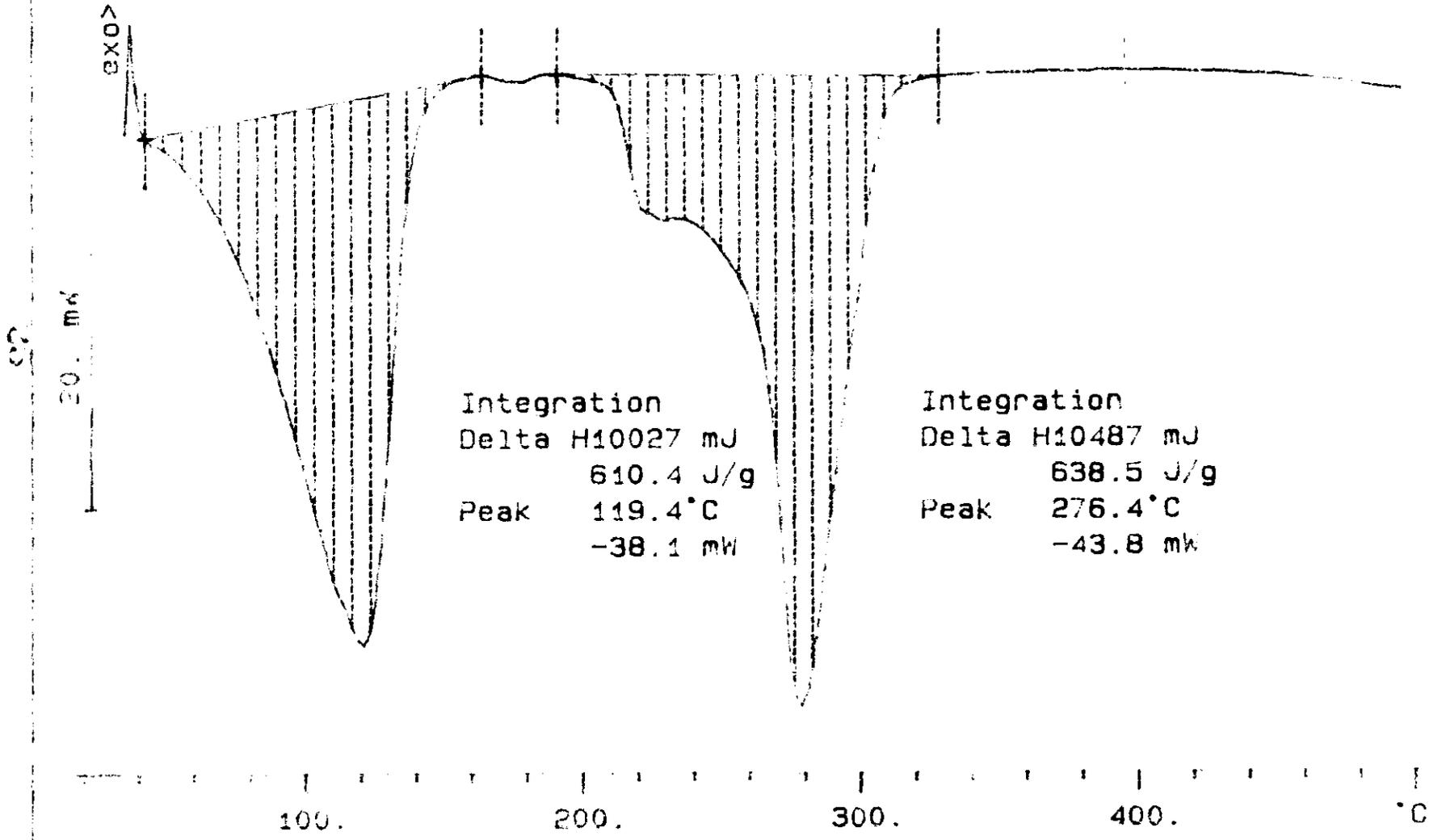
File: 00041.001

DSC METTLER

02-May-95

Ident: 0.0

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WHC-SD-WM-DP-110, REV.0

BEST AVAILABLE COPY

DSC S95T000630 DUP

19.724 mg

Rate: 10.0 °C/min

File: 00042.001

DSC METTLER

02-May-95

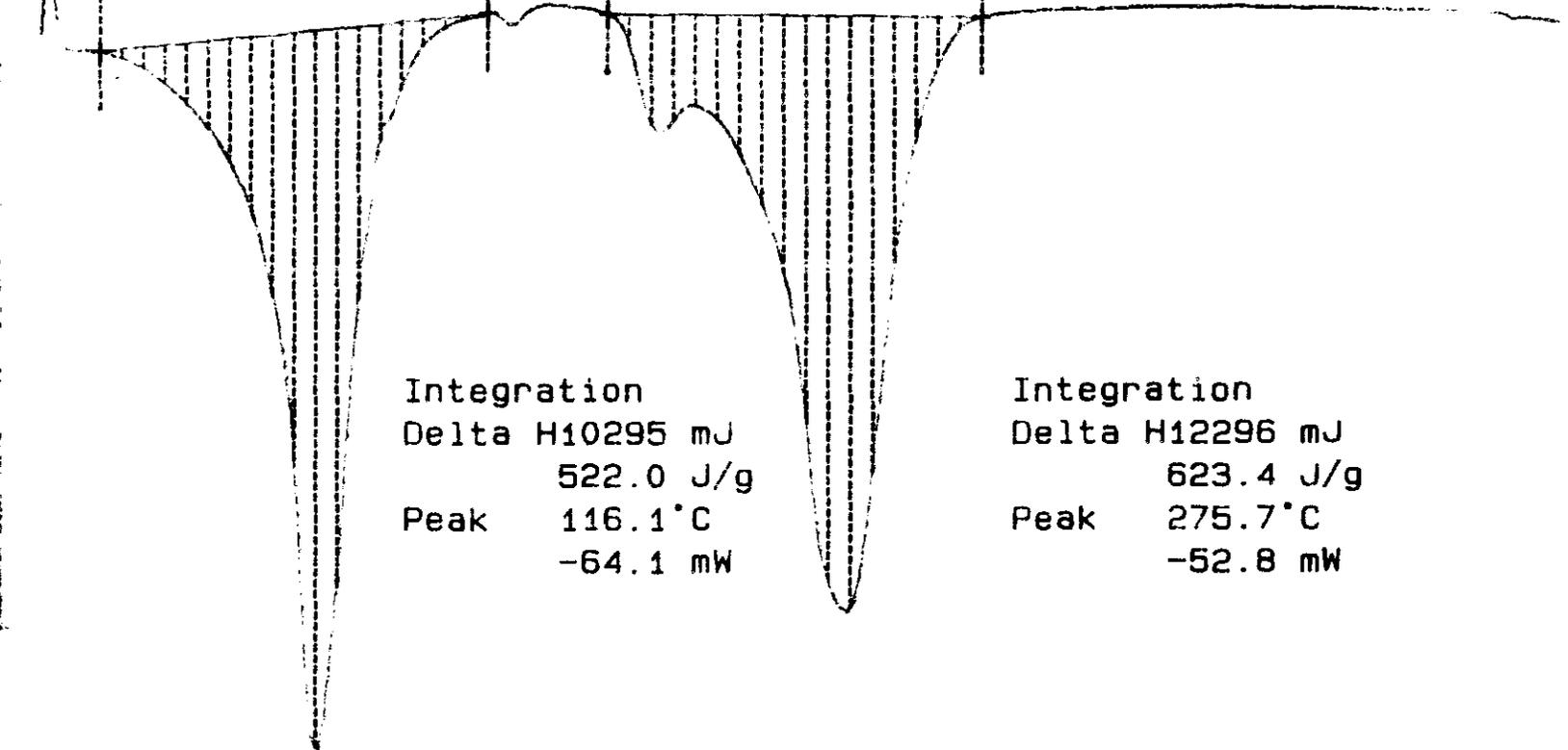
Ident: 0.0

222-S Laboratory

exo >

50. mW

90



Integration
Delta H10295 mJ
522.0 J/g
Peak 116.1 °C
-64.1 mW

Integration
Delta H12296 mJ
623.4 J/g
Peak 275.7 °C
-52.8 mW

100.

200.

300.

400.

°C

WMC-SD-WM-BP110/REV10

LABCORE Data Entry Template for Worklist# 1022

Analyst: SMF Instrument: DSC01 Book # 12174-A

Method: LA-514-113 Rev/Mod 1.1

Worklist Comment: Please run U-202 DSC under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	28.45	30.4	N/A	Joules/g
9500052	U-202	2 SAMPLE	S95T000632	0	DSC-01	SOLID	N/A	Ø		Joules/g
9500052	U-202	3 DUP	S95T000632	0	DSC-01	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 1022

Luis M. Sutton 5-1-95
Analyst Signature Date

[Signature] 5/2/95
Analyst Signature Date

Verified by Blandina Valenzuela

S95T000632 produced three endotherms one at 117.6°C with a delta H of 472.3 J/g, second at 178.9°C with a delta H of 2.8 J/g and third at 271.3°C with a delta H of 655.1 J/g.
Data Entry Comments:

S95T000632 light yellow thick material w/ some H₂O layer of material

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 28 TO 30.

BEST AVAILABLE COPY

DSC STD 12N14-A

6.590 mg

Rate: 10.0 °C/min

File: 00020.001

DSC METTLER 30-Apr-95

Ident: 0.0

222-S Laboratory

exo >

10. mW

Integration
Delta H 200 mJ
30.4 J/g
Peak 158.6 °C
-14.2 mW

120.

140.

160.

180. °C

WHC-SD-WM-DP-110, REV. 0

John M. Zetter 4/1995

BEST AVAILABLE COPY

S95T000632 N2

32.939 mg

Rate: 10.0 °C/min

File: 00027.001

DSC METTLER

01-May-95

Ident: 0.0

222-S Laboratory

exo >

50. mW

Integration
Delta H 92 mJ
2.8 J/g
Peak 178.9 °C
-1.4 mW

Integration
Delta H20919 mJ
635.1 J/g
Peak 271.3 °C
-57.7 mW

Integration
Delta H15557 mJ
472.3 J/g
Peak 117.6 °C
-72.7 mW

100.

200.

300.

400.

°C

WHC-SD-WM-DP-110, REV. 0

BEST AVAILABLE COPY

S95T000632 (DUP) N2

File: 00029.001 DSC METTLER 01-May-95

32.204 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

exo >

50. mW

Integration
Delta H 89 mJ
2.8 J/g
Peak 178.9 °C
-1.3 mW

Integration
Delta H 19133 mJ
594.1 J/g
Peak 271.3 °C
-58.1 mW

Integration
Delta H 14925 mJ
463.4 J/g
Peak 110.0 °C
-65.8 mW

100.

200.

300.

400.

°C

WHC-SD-WM-DP-110, REV.0

LABCORE Data Entry Template for Worklist# 1024

Analyst: SMF Instrument: DSC01 Book # 12N:4-A

Method: LA-514-113 Rev/Mod B1

Worklist Comment: Please run U-202 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>30.3</u>	<u>N/A</u>	Joules/g
95000052	U-202	4 SAMPLE	S95T000643	0	DSC-01	SOLID	<u>N/A</u>	<u>∅</u>		Joules/g
95000052	U-202	5 DUP	S95T000643	0	DSC-01	SOLID	<u>∅</u>	<u>∅</u>	<u>N/A</u>	Joules/g

Final page for worklist # 1024

See attached for signatures 5-1-95

Analyst Signature [Signature] Date 5-1-95

Analyst Signature _____ Date _____

Verified by Blandina Valenzuela 5-2-95

Data Entry Comments: 95T000643 produced two endotherms one at 115.5°C with an enthalpy of 503.5 J/g and the second at 262.6°C with a enthalpy of 129.6 J/g. The sample was a light yellow material w/ large crystals (> 50% crystals)

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 1024

Analyst: SNF Instrument: DSC-01 Book # 12N14-A

Method: LA-514-113 Rev/Mod B-1

Worklist Comment: Please run U-202 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
95000054	U-202	2 SAMPLE	S95T000610	0	DSC-01	SOLID	N/A			Joules/g
95000054	U-202	3 DUP	S95T000610	0	DSC-01	SOLID			N/A	Joules/g
95000052	U-202	4 SAMPLE	S95T000643	0	DSC-01	SOLID	N/A			Joules/g
95000052	U-202	5 DUP	S95T000643	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 1024

Susie M. Jutton 5-1-95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

S95T000610 - Analyzed

S95T000643 - large yellow material w/ large impurities
(2500 mg)

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 33 TO 35.

BEST AVAILABLE COPY

DSC STD 12N14-A

6.590 mg

Rate: 10.0 °C/min

File: 00020.001

DSC METTLER 30-Apr-95

Ident: 0.0

222-S Laboratory

exo >

10. mW

Integration

Delta H 199 mJ

30.3 J/g

Peak 158.6 °C

-14.2 mW

120.

140.

160.

180. °C

333

WHC-SD-WM-DP-110, REV. 0

BEST AVAILABLE COPY

S95T000643 N2

45.843 mg

Rate: 10.0 °C/min

File: 00022.001

DSC METTLER

30-Apr-95

Ident: 0.0

222-S Laboratory

EXO >

50. mW

Integration

Delta H 5941 mJ

129.6 J/g

Peak 265.6 °C

-19.0 mW

Integration

Delta H 23081 mJ

503.5 J/g

Peak 115.3 °C

-74.8 mW

100.

200.

300.

400.

°C

BEST AVAILABLE COPY

S95T000643 (DUP) N2

38.652 mg

Rate: 10.0 °C/min

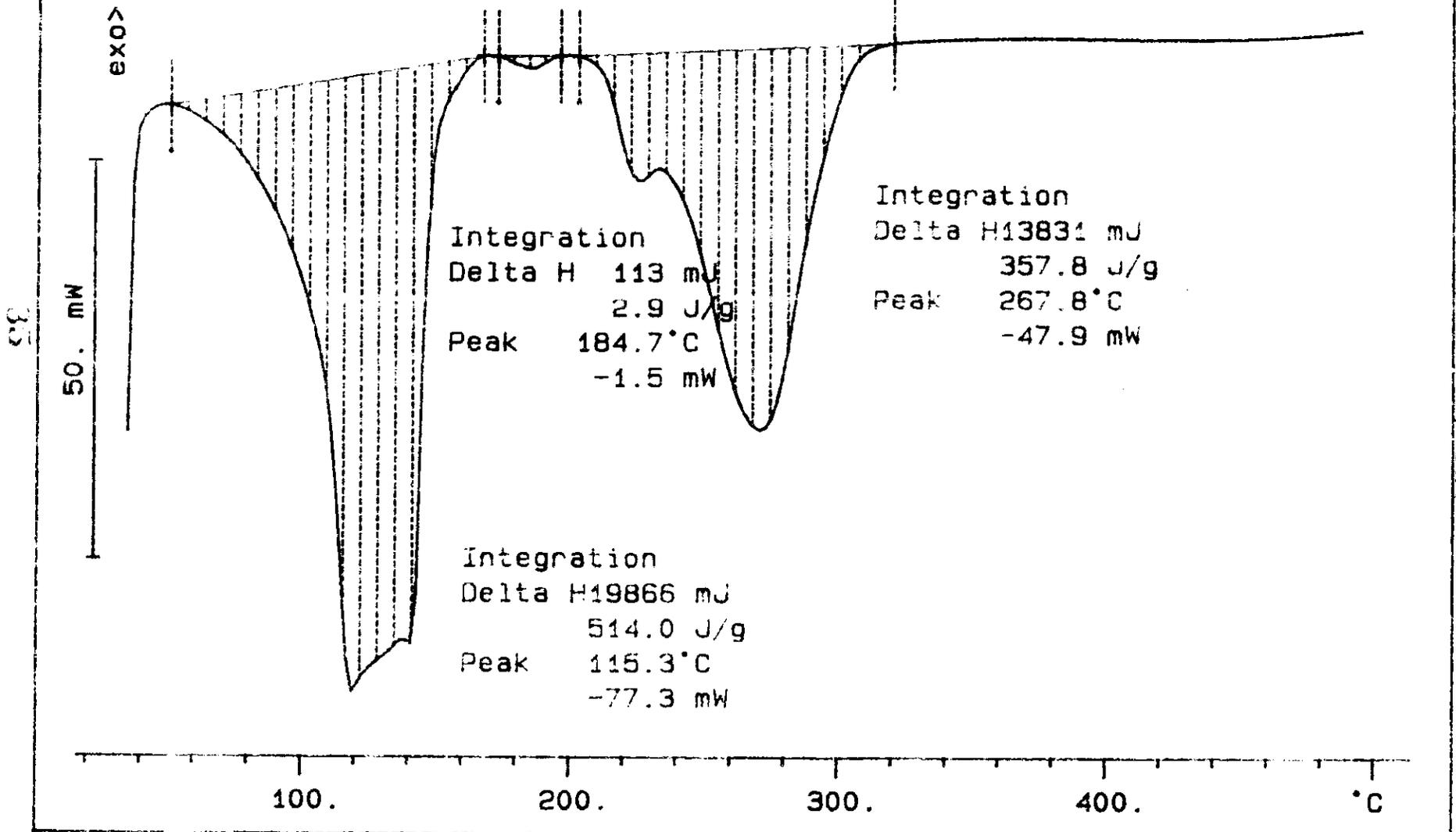
File: 00024.001

DSC METTLER

30-Apr-95

Ident: 0.0

222-S Laboratory



WMC-SD-WM-DP-110, REV. 0

LABCORE Data Entry Template for Worklist# 1025

Analyst: DWS Instrument: DSC01 Book # 12W14-A

Method: LA-514-113 Rev/Mod B-1

Worklist Comment: Please run U-202 DSC under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>31.4</u>	<u>N/A</u>	Joules/g
95000052	U-202	2 SAMPLE	S95T000644	0	DSC-01	SOLID	<u>N/A</u>	<u>∅</u>		Joules/g
95000052	U-202	3 DUP	S95T000644	0	DSC-01	SOLID	<u>∅</u>	<u>∅</u>	<u>N/A</u>	Joules/g

Final page for worklist # 1025

Daniel W. Smith 4-25-95
Analyst Signature Date

[Signature] 4-25-95
Analyst Signature Date

Verified by Blandina Valenzuela 4/25/95

Data Entry Comments: Sample 4+ placed at 15.30 with a delta H of 68.40 J/g, and the second sample
one at 15.30 with a delta H of 68.40 J/g, and the second sample
postulated to be aluminum pyruvate, was at 16.30 with a delta H of
496.0 J/g.

Units shown for QC (SBK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number.
R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 37 TO 39.

BEST AVAILABLE COPY

DSC STD 12N14-A

6.340 mg

Rate: 10.0 °C/min

File: 00028.001

DSC METTLER 24-Apr-95

Ident: 0.0

222-S Laboratory

EXO

10. mW

Integration

Delta H 199 mJ

31.4 J/g

Peak 158.6°C

-14.0 mW

David W. Smith

4-25-95

120.

140.

160.

180. °C

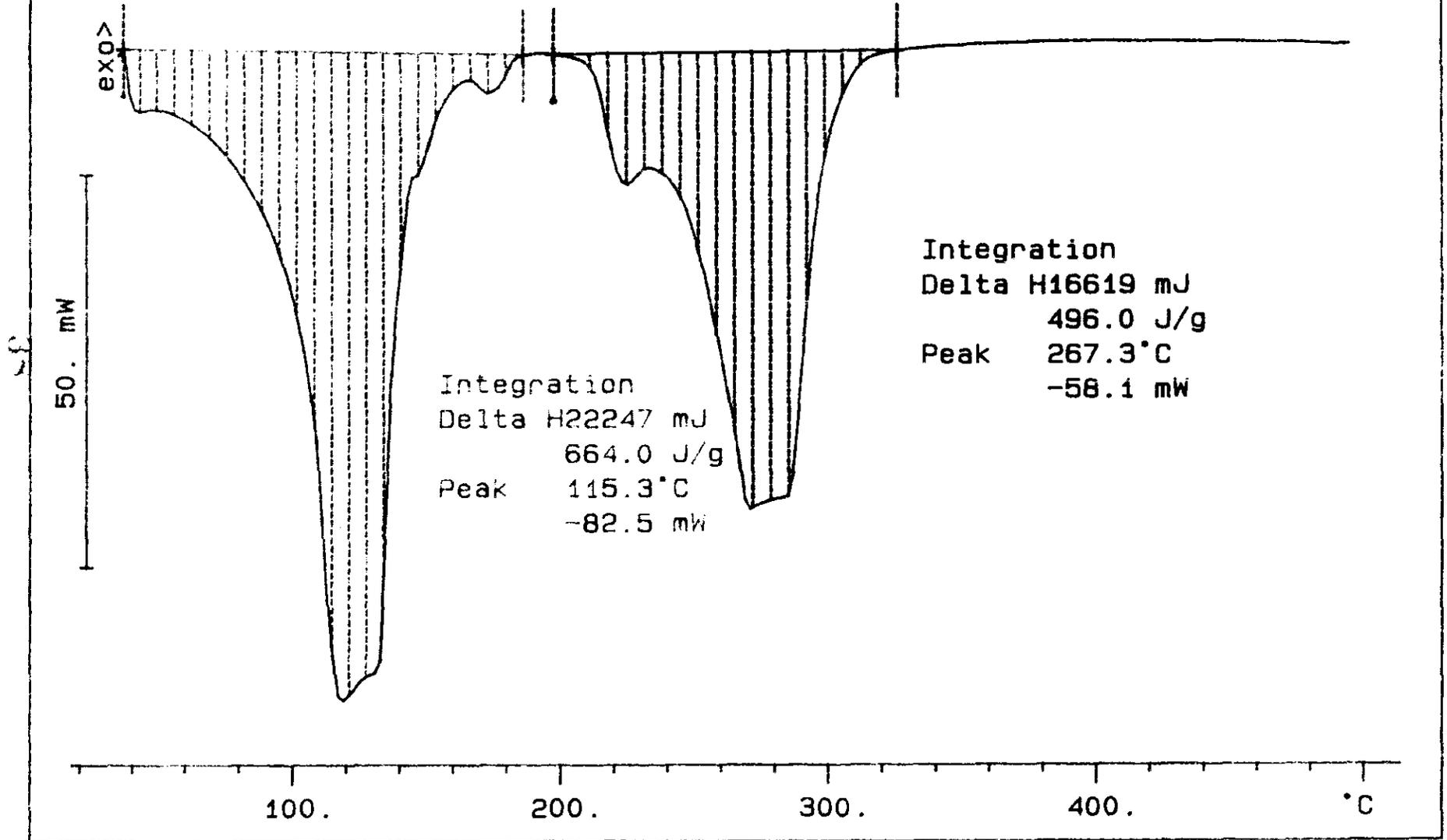
WHC-SD-WM-DP-110, REV. 0

BEST AVAILABLE COPY

S95T000644 N2
33.503 mg

Rate: 10.0 °C/min

File: 00030.001 DSC METTLER 24-Apr-95
Ident: 0.0 222-S Laboratory



WHC-SD-WM-DP-110, REV. 0

TEST AVAILABLE COPY

S95T000644 (DUP) N2

34.333 mg

Rate: 10.0 °C/min

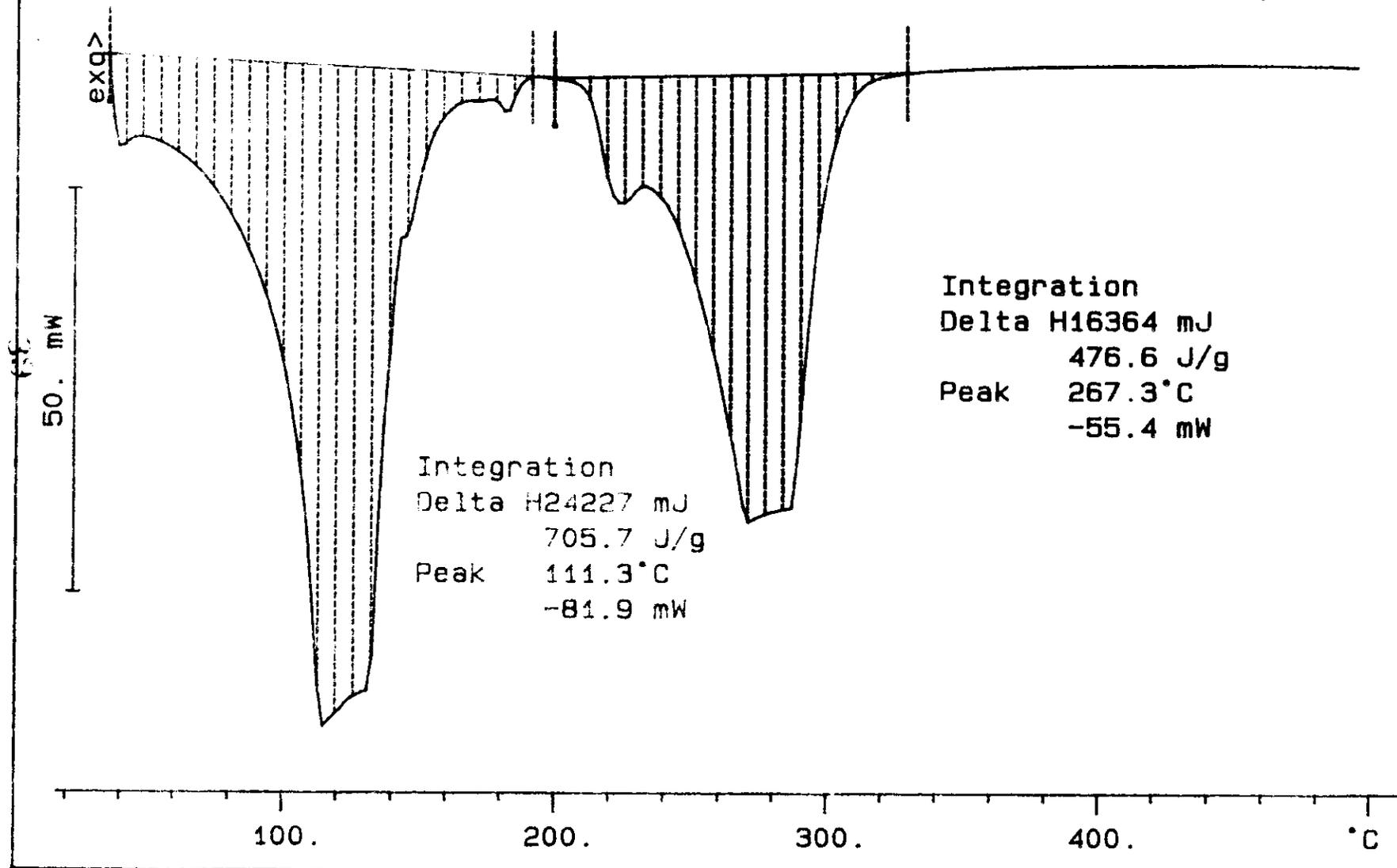
File: 00032.001

DSC METTLER

24-Apr-95

Ident: 0.0

222-S Laboratory



WHC-SD-WM-DP-110, REV. 0

LABCORE Data Entry Template for Worklist# 1028

Analyst: DWJ Instrument: DSC-01 Book # 12W14-17

Method: LA-514-113 Rev/Mod B-1

Worklist Comment: Please run U-202 DSC under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	LIQUID	<u>28.45</u>	<u>26.1</u>	<u>N/A</u>	Joules/g
95000039	U-202	2 SAMPLE	S95T000582	0		DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000039	U-202	3 DUP	S95T000582	0		DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
95000039	U-202	4 SAMPLE	S95T000588	0		DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000039	U-202	5 DUP	S95T000588	0		DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 1028

[Signature] 5-4-95
Analyst Signature Date

[Signature] 5-4-95
Analyst Signature Date

Verified by Blandina Valenzuela 5/5/95

Data Entry Comments:

data HCl of the liquid residual is 26.1 with units of Joules/g

of the liquid residual is 26.1 with units of Joules/g

of the liquid residual is 26.1 with units of Joules/g

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

see dry weight of chemical used to create on the flame point.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 41 TO 45.

DSC STD 12N14-A

6.525 mg

Rate: 10.0 °C/min

File: 00061.001

DSC METTLER

03-May-95

Ident: 0.0

222-S Laboratory

EXO

5. mW

Integration

Delta H 170 mJ

26.1 J/g

Peak 160.6 °C

-8.4 mW

David W. Smith

~~5-4-95~~
5-4-95

5-5-95 BDV

120.

140.

160.

180. °C

BEST AVAILABLE COPY

WHC-SD-WM-DP-110, REV. 0

BEST AVAILABLE COPY

S95T000582 N2

12.402 mg

Rate: 10.0 °C/min

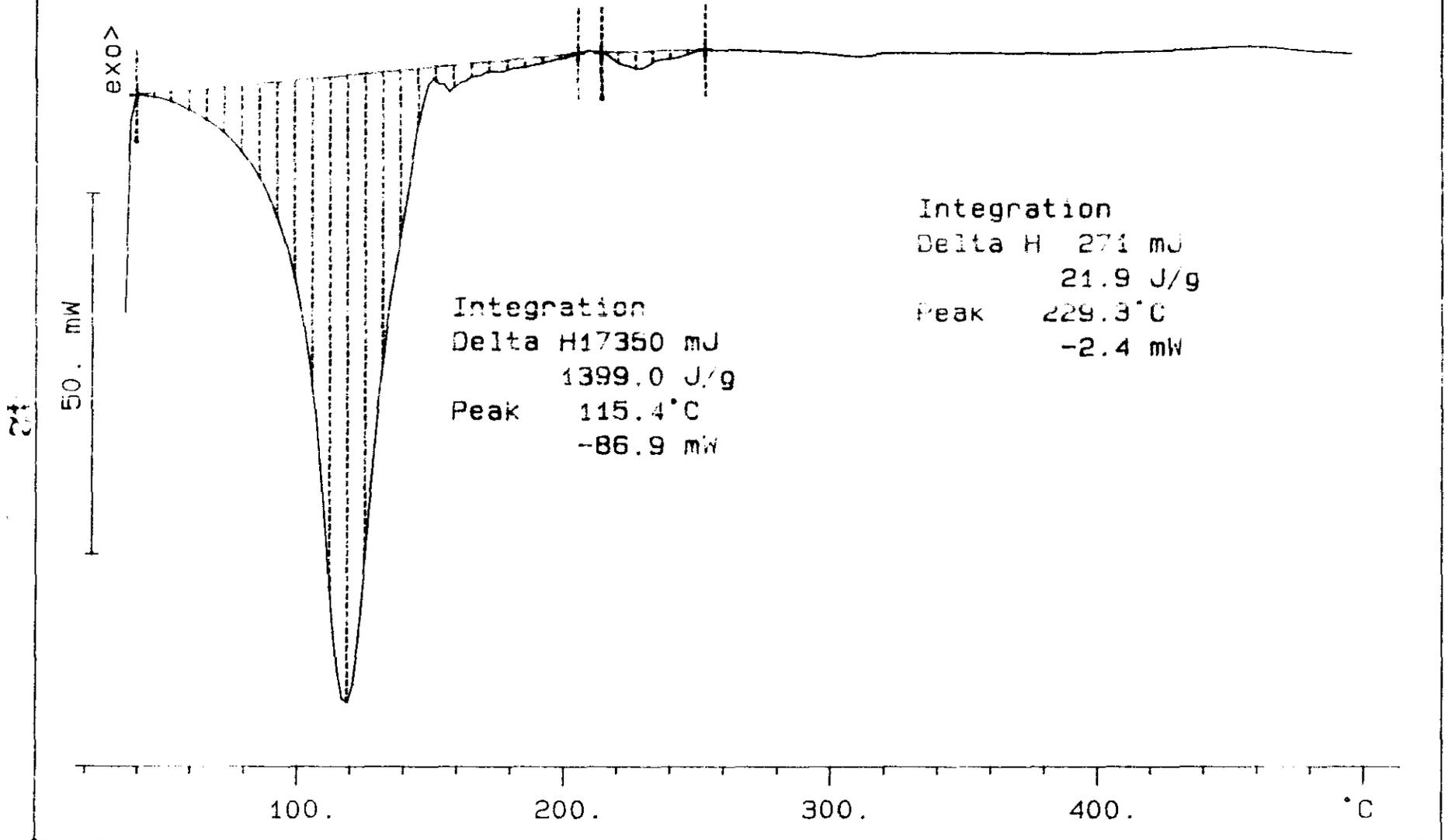
File: 00063.001

DSC METTLER

04-May-95

Ident: 0.0

222-S Laboratory



TEST AVAILABLE COPY

S95T000582 (DUP) N2

13.854 mg

Rate: 10.0 °C/min

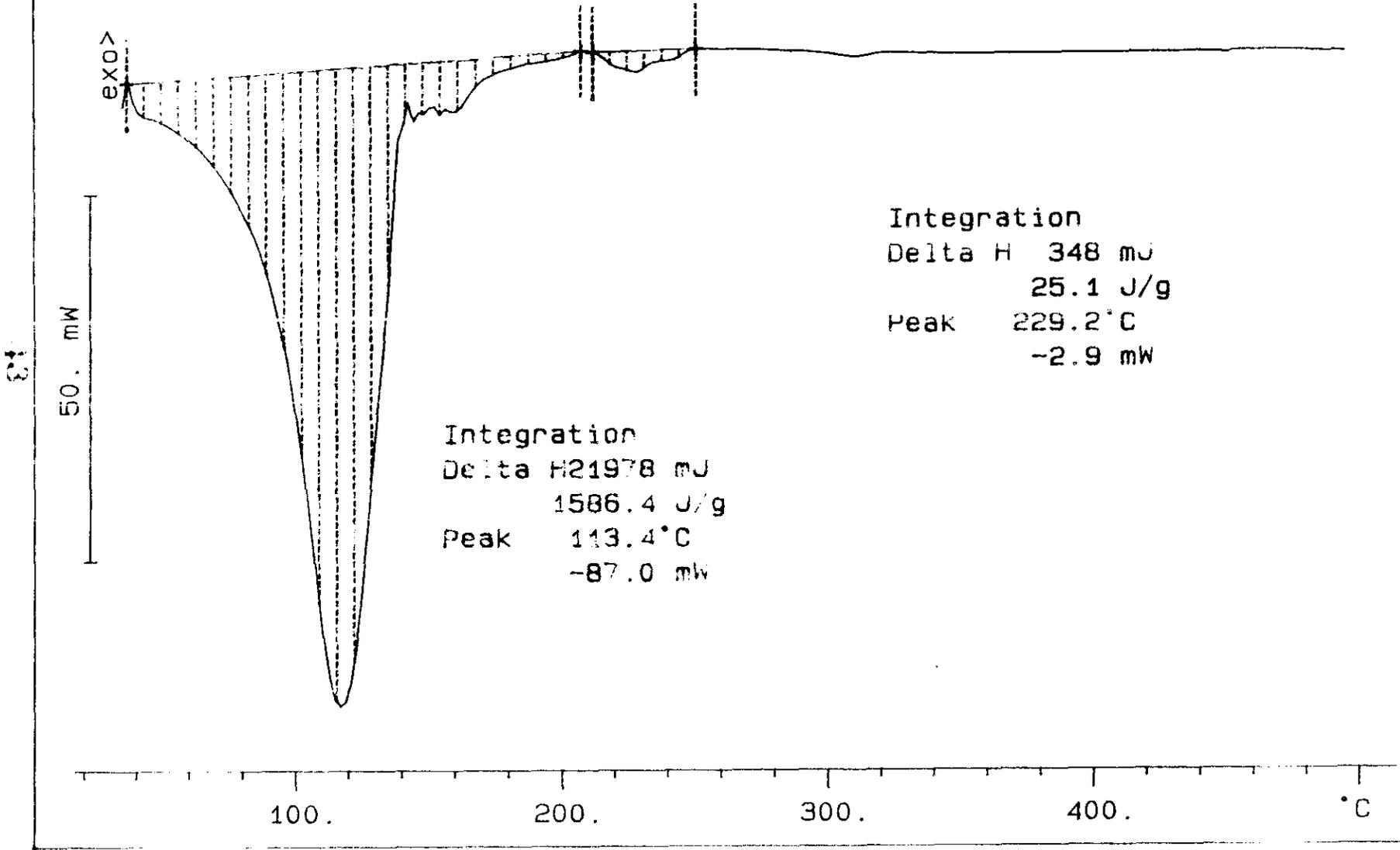
File: 00065.001

DSC METTLER

05-May-95

Ident: 0.0

222-S Laboratory



WHC-SD-WM-DP-110, REV. 0

TEST AVAILABLE COPY

40.

S95T000588 N2

13.093 mg

Rate: 10.0 °C/min

File: 00067.001

DSC METTLER

05-May-95

Ident: 0.0

222-S Laboratory

EXO >

14

50. mW

Integration

Delta H 279 mJ

21.3 J/g

Peak 227.1 °C

-2.6 mW

Integration

Delta H 19294 mJ

1473.6 J/g

Peak 109.3 °C

-87.7 mW

100.

200.

300.

400.

°C

WHC-SD-WM-DP-110, REV. 0

BEST AVAILABLE COPY

S95T000588 (DUP) N2

12.523 mg

Rate: 10.0 °C/min

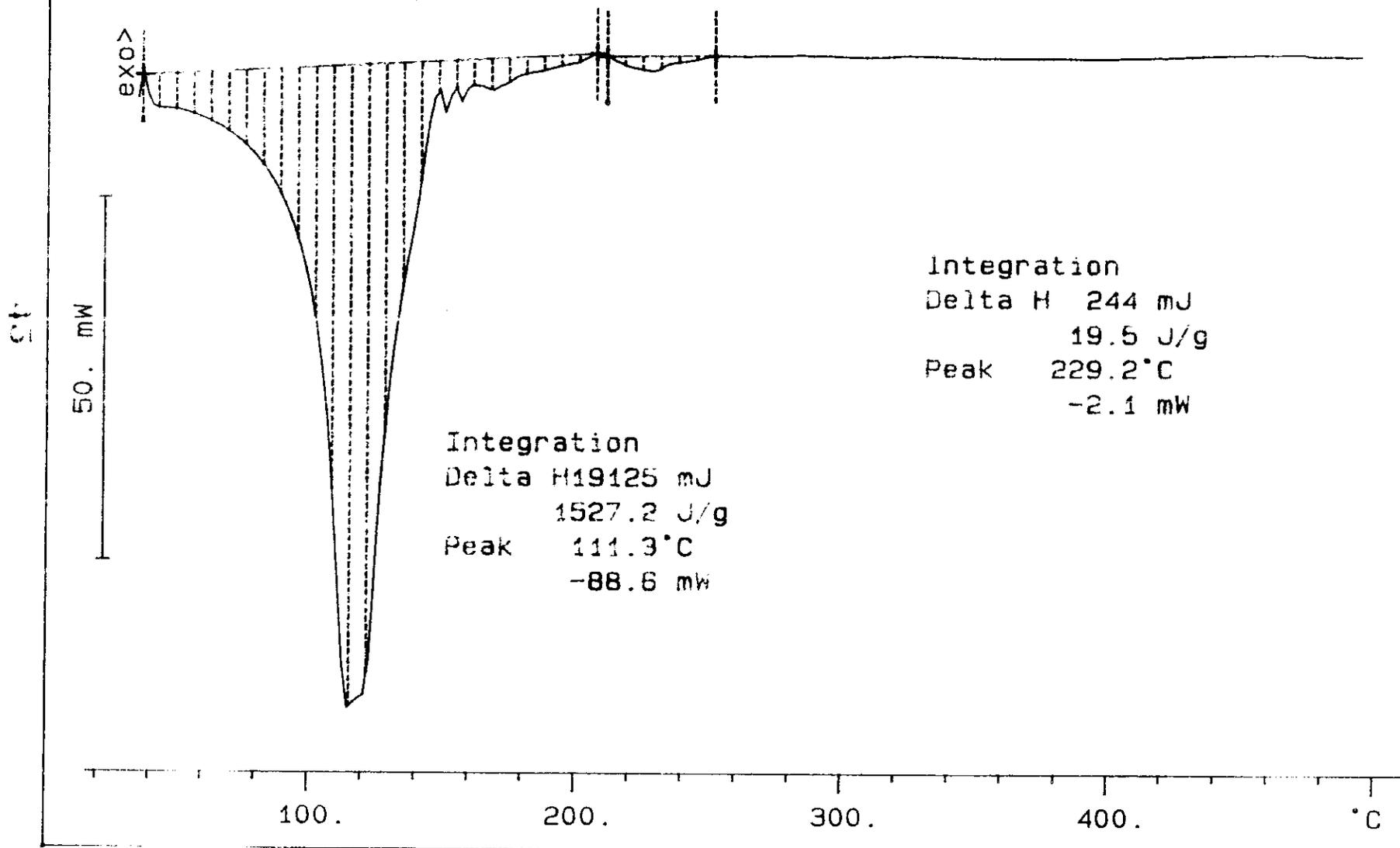
File: 00069.001

DSC METTLER

08-May-95

Ident: 0.0

222-S Laboratory



WHC-SD-WM-DP-110, REV. 0

LABCORE Data Entry Template for Worklist# 1029

Analyst: STW Instrument: DSC01 Book # 12N14-A

Method: LA-514-113 Rev/Mod A 2

Worklist Comment: Please run U-202 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC 01	LIQUID	<u>22.45</u>	<u>29.1</u>	N/A	Joules/g
95000052	U-202	4 SAMPLE	S95T000621	0	DSC 01	LIQUID	<u>N/A</u>	<u>2</u>		Joules/g
95000052	U-202	5 DUP	S95T000621	0	DSC 01	LIQUID	<u>2</u>	<u>2</u>	N/A	Joules/g

Final page for worklist # 1029

Susie M. Julifer
Analyst Signature Date 5/3/95

Dany...
Analyst Signature Date 5/4/95

Verified by Blandina Valenzuela 5/5/95

Data Entry Comments:

...
...
...

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 47 TO 49.

5/5/95 BOK

03
02-May-95

DSC STD 12N14-A

File: 00044.001 DSC METTLER

6.340 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

<exo

10. mW

Integration
Delta H 185 mJ
29.1 J/g
Peak 158.7 °C
-11.7 mW

120.

140.

160.

180.

°C

Handwritten signature

TEST AVAILABLE ON

WHC-SD-WM-DP-110, REV. 0

12

BEST AVAILABLE COPY

DSC S95T000621

13.249 mg

Rate: 10.0 °C/min

File: 00049.001

Ident: 0.0

DSC METTLER 03-May-95

222-S Laboratory

exo

50. mW

Integration
Delta H 240 mJ
18.1 J/g
Peak 229.3 °C
-2.3 mW

Integration
Delta H 127 mJ
9.6 J/g
Peak 413.3 °C
-2.6 mW

Integration
Delta H 18526 mJ
1398.3 J/g
Peak 111.7 °C
-77.9 mW

100.

200.

300.

400.

°C

TEST AVAILABLE COPY

S95T000621 (DUP) N2

File: 00051.001

DSC METTLER

03-May-95

12.219 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

exo >

Integration
Delta H 295 mJ
24.2 J/g
Peak 227.2°C
-2.4 mW

Integration
Delta H 17045 mJ
1395.0 J/g
Peak 111.6°C
-78.2 mW

50. mW

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist# 1030

Analyst: Instrument: DSC01 03 Book #

Method: LA-514-114 Rev/Mod

5/5/95
BDV

Worklist Comment: Please run U-202 DSC under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIQUID	<u> </u>	<u> </u>	N/A	Joules/g
95000052	U-202	2 SAMPLE	S95T000636	0	DSC-03	LIQUID	N/A	<u> </u>		Joules/g
95000052	U-202	3 DUP	S95T000636	0	DSC-03	LIQUID	<u> </u>	<u> </u>	N/A	Joules/g
95000052	U-202	4 SAMPLE	S95T000654	0	DSC-03	LIQUID	N/A	<u> </u>		Joules/g
95000052	U-202	5 DUP	S95T000654	0	DSC-03	LIQUID	<u> </u>	<u> </u>	N/A	Joules/g

Final page for worklist # 1030

See attached for signature
Analyst Signature Date

[Signature] 5/4/95
Analyst Signature Date

Verified by Blandina Valenzuela 5/5/95

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 1030

Analyst: SNF Instrument: DSC01 Book # 12 N'14-17

Method: LA-514-113 Rev/Mod 130

Worklist Comment: Please run U-202 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID			N/A	Joules/g
95000052	U-202	2 SAMPLE	S95T000636	0	DSC-01	LIQUID	N/A			Joules/g
95000052	U-202	3 DUP	S95T000637	0	DSC-01	LIQUID			N/A	Joules/g
95000052	U-202	4 SAMPLE	S95T000654	0	DSC-01	LIQUID	N/A			Joules/g
95000052	U-202	5 DUP	S95T000654	0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 1030

Lurie M. Fulton 5-3-95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

S95T000636 - bright yellow liquid
S95T000654 clear colorless liquid

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC

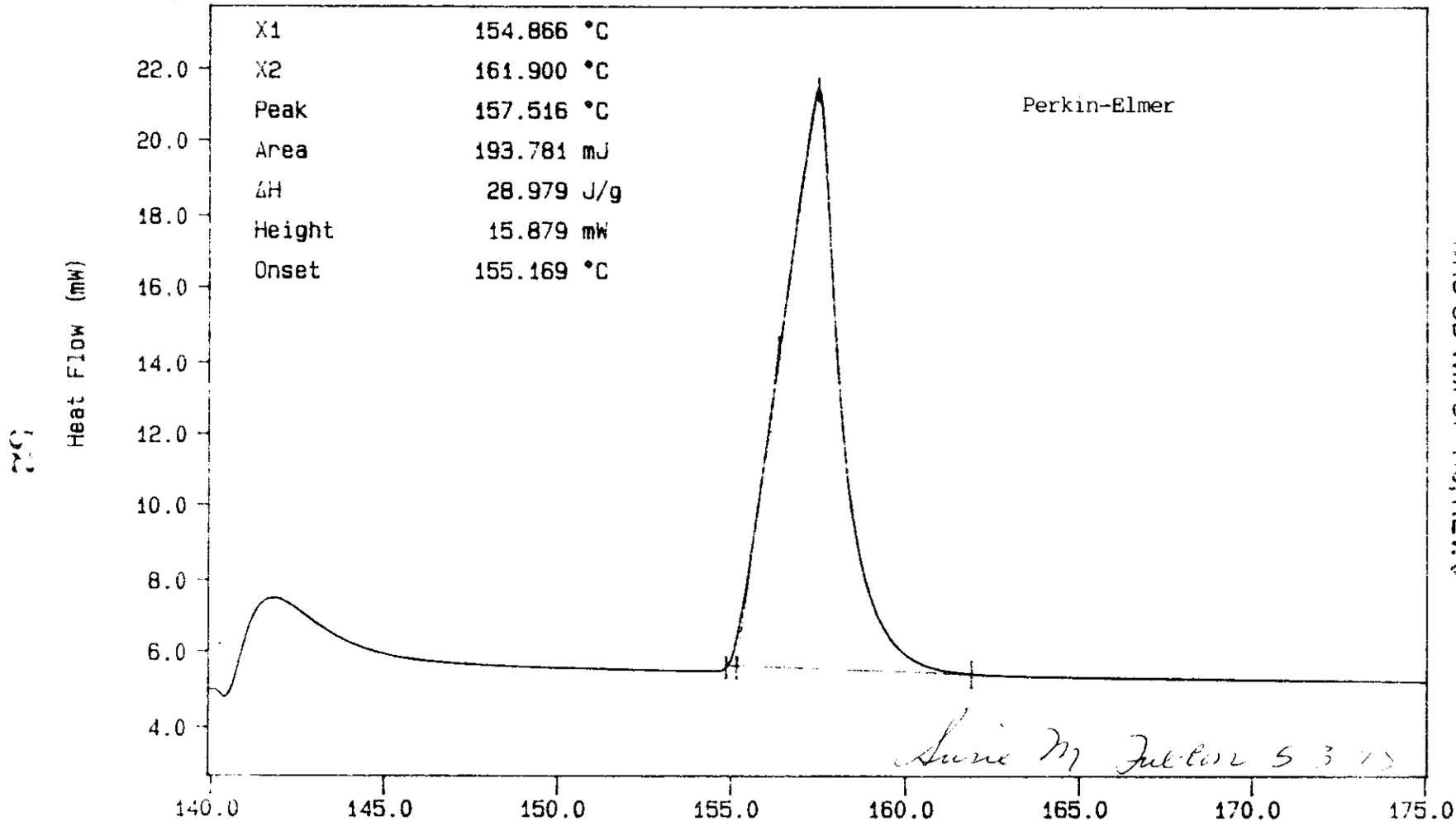
File info: IND050301 Wed May 3 08:39:26 1995

Sample Weight: 6.687 mg

Indium at 10C/¹¹¹¹ ¹¹²⁰ 5/15/95
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT

12N14-A COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 52 TO 56.
5/5/95 BCV

BEST AVAILABLE COPY



WHC-SD-WM-DP-110, REV.0

N2 exotherm down
TEMP1: 140.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 178.0 C

SM FULTON
Westinghouse Hanford Co.
222-S Lab
Wed May 3 08:46:31 1995

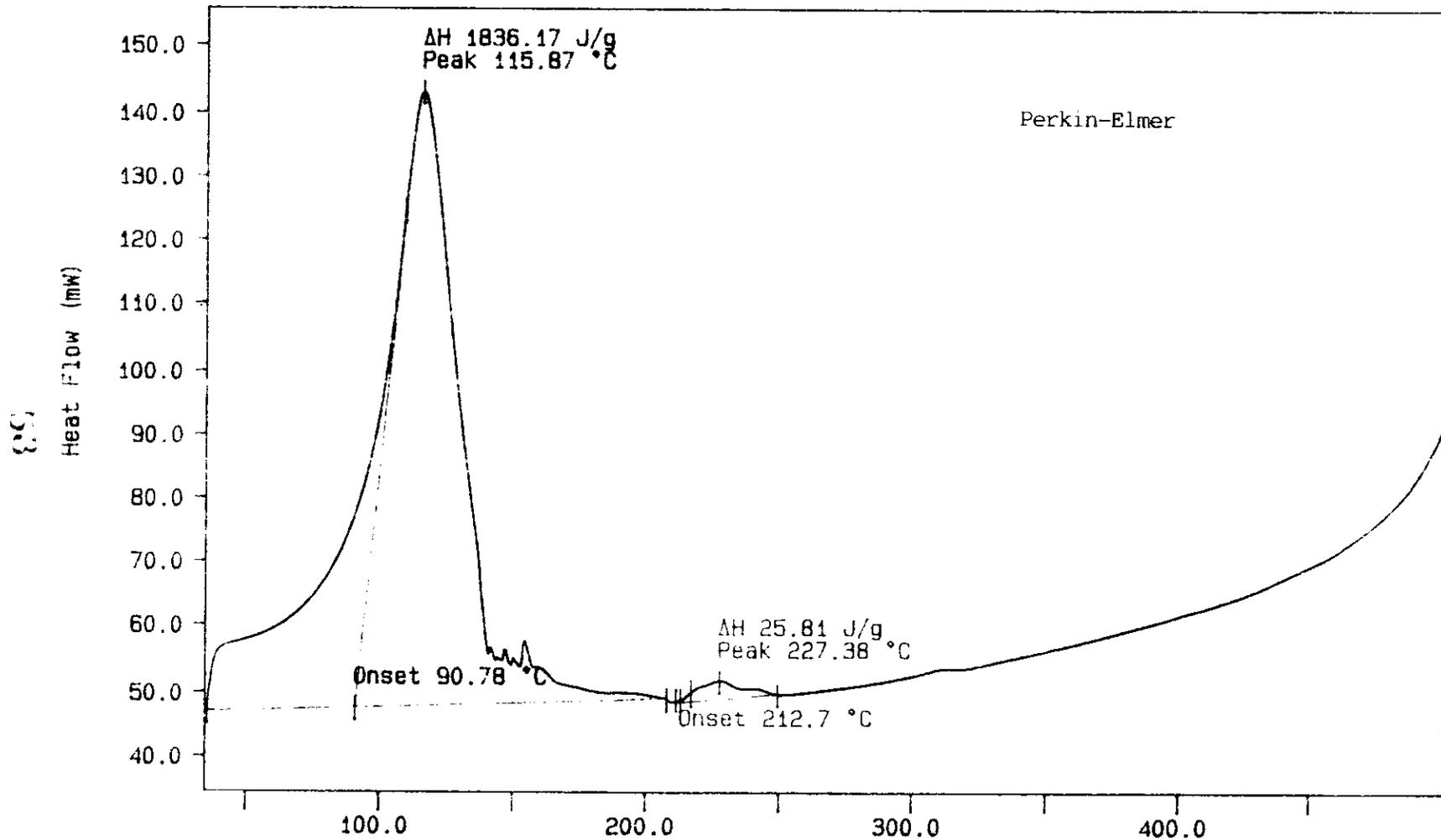
Curve 1: DSC

File info: SAM050303 Wed May 3 12:38:46 1995

Sample Weight: 12.670 mg

S95T000636, 10C/min

TEST AVAILABLE COPY



WHC-SD-WM-DP-110, REV.0

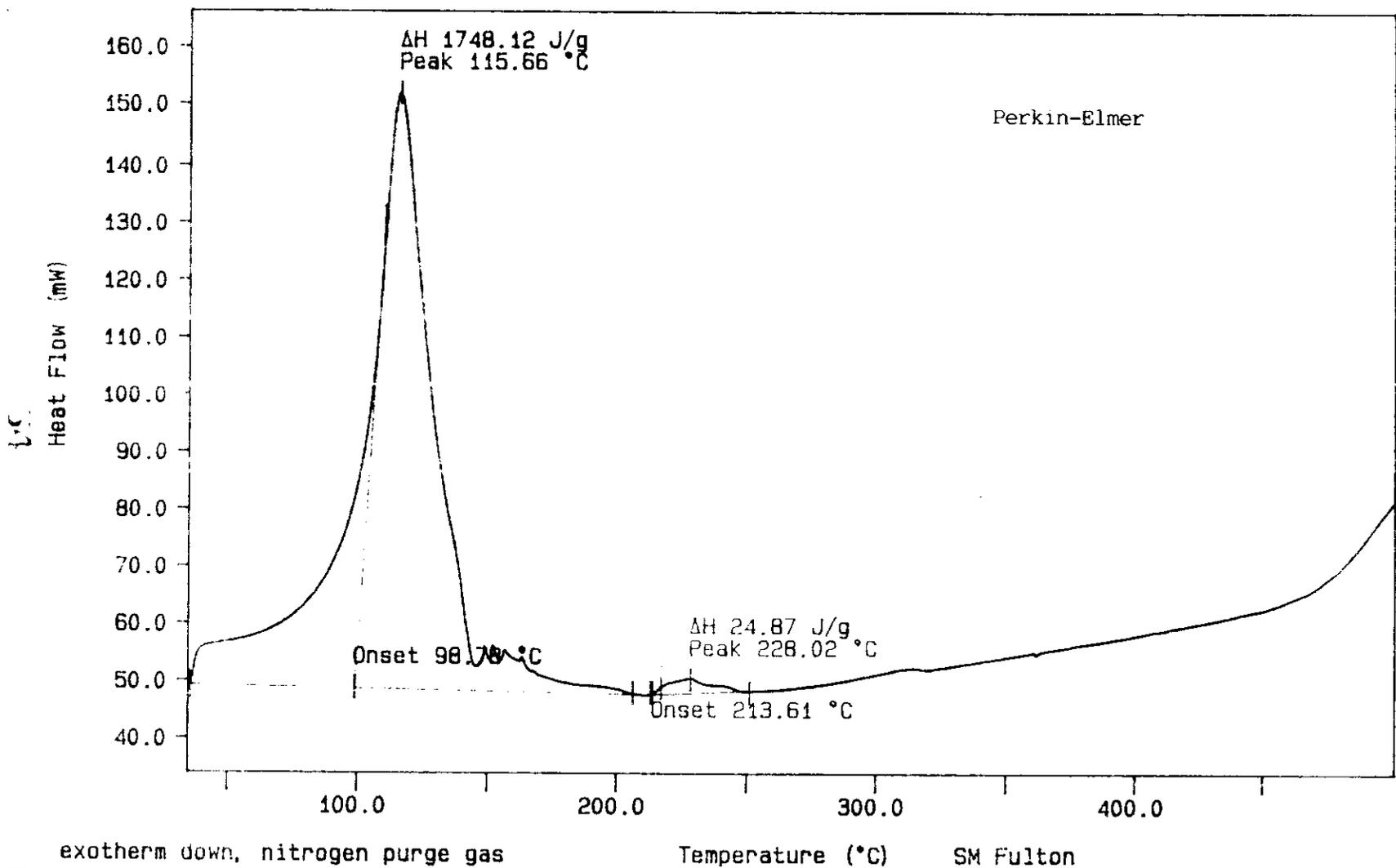
exotherm down, nitrogen purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Wed May 3 13:25:51 1995

Curve 1: DSC
File info: SAM050304 Wed May 3 14:17:41 1995
Sample Weight: 12.040 mg
S95T000636 (DUP), 10C/min

BEST AVAILABLE COPY



WHC-SD-WM-DP-110, REV.0

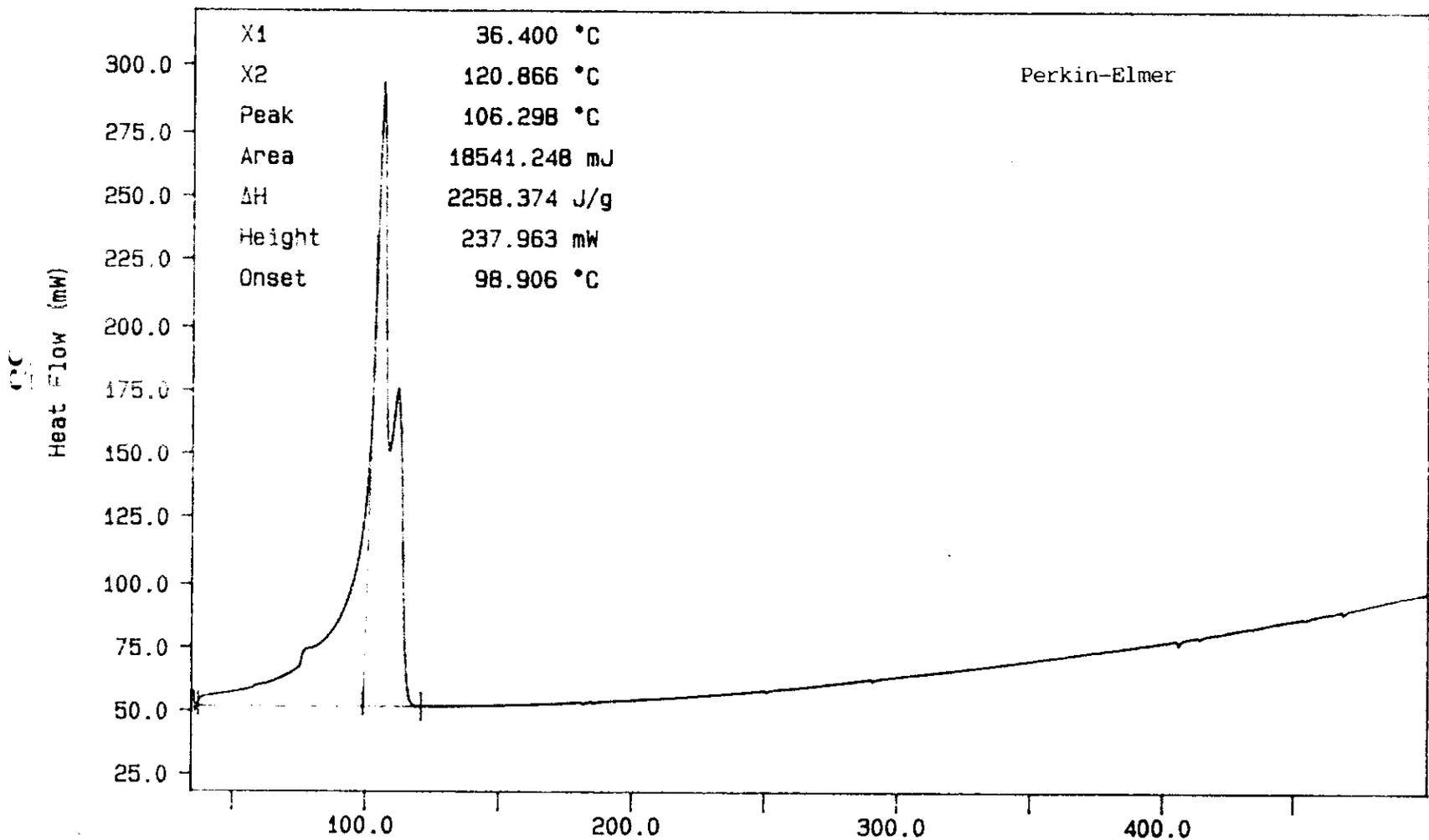
05/11/95 09:27

exotherm down, nitrogen purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Wed May 3 14:25:55 1995

Curve 1: DSC
File info: SAM050301 Wed May 3 09: 48: 59 1995
Sample Weight: 8.210 mg
S95T000654, 10C/min

BEST AVAILABLE COPY



WHC-SD-WM-DP-110, REV. 0

exotherm down, nitrogen purge gas
TEMP1: 98.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

Temperature (°C) SM Fulton
Westinghouse Hanford Co.
222-S Lab
Wed May 3 09: 51: 15 1995

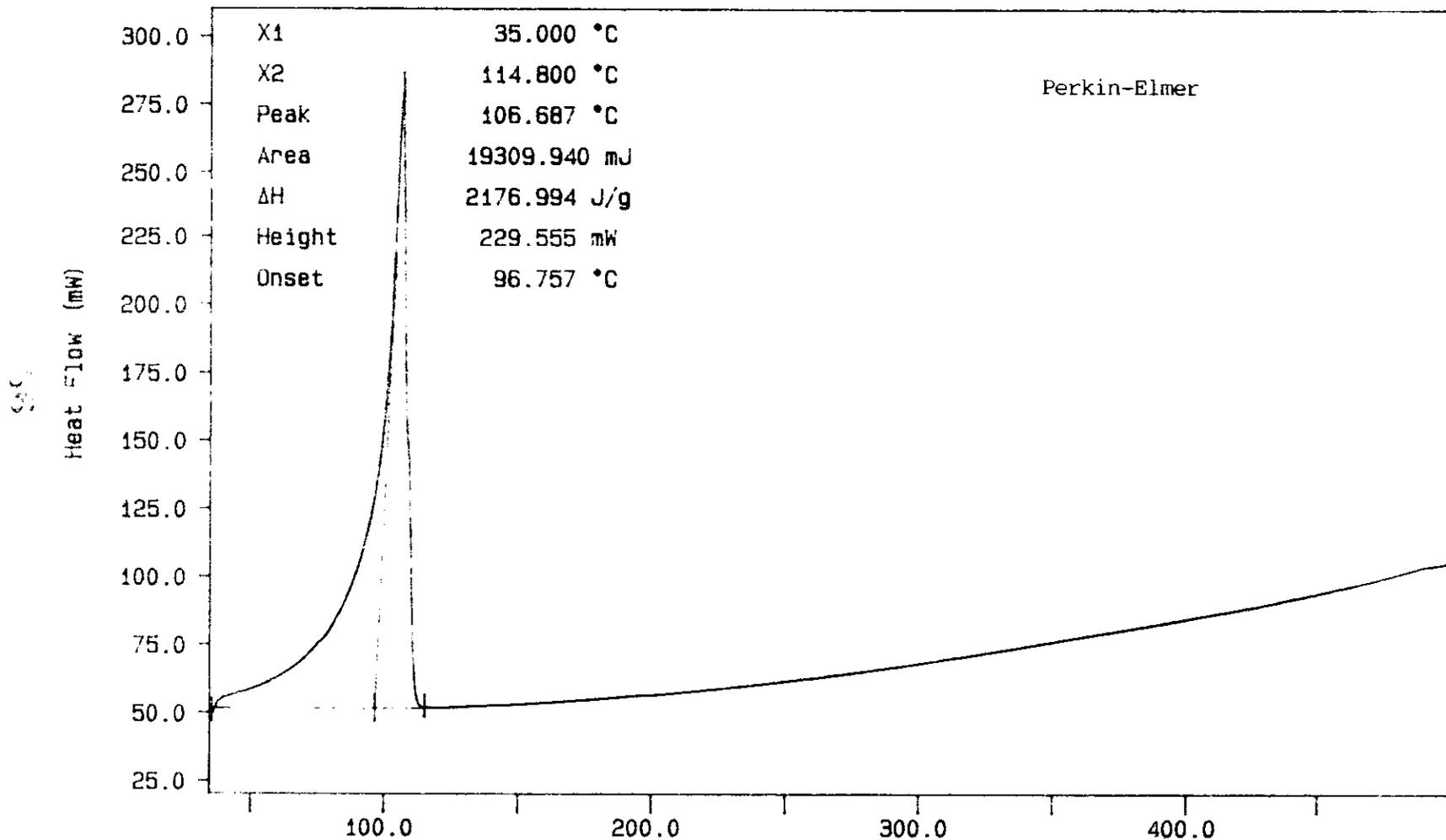
Curve 1: DSC

File info: SAM050302 Wed May 3 11:33:18 1995

Sample Weight: 8.870 mg

S95T000654 (DUP), 10/min

NOT AVAILABLE COPY



WHC-SD-WM-DP-110, REV.0

3-11-95

exotherm down, nitrogen purge gas
TEMP1: 35.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Wed May 3 11:40:57 1995

LABCORE Data Entry Template for Worklist# 1034

Analyst: DWS Instrument: TGA01 Book # 42W8-17

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run U-202 TGA under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.19</u>	<u>58.70</u>	<u>N/A</u>	%
95000039	U-202	2 SAMPLE	S95T000582	0	TGA-01	LIQUID	<u>N/A</u>	<u>72.60</u>		%
95000039	U-202	3 DUP	S95T000582	0	TGA-01	LIQUID	<u>72.60</u>	<u>73.24</u>	<u>N/A</u>	%
95000039	U-202	4 SAMPLE	S95T000588	0	TGA-01	LIQUID	<u>N/A</u>	<u>73.21</u>		%
95000039	U-202	5 DUP	S95T000588	0	TGA-01	LIQUID	<u>73.21</u>	<u>72.23</u>	<u>N/A</u>	%

Final page for worklist # 1034

 DWS 5-4-95
Analyst Signature Date

 DWS 5-4-95
Analyst Signature Date

Verified by Blandina Valenzuela 5/3/95

Data Entry Comments:

 Standard corrected for the dilution factor. All off line samples.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 58 TO 62.

BEST AVAILABLE COPY

TGA STD 42NB-A
16.621 mg

Rate: 10.0 °C/min

File: 00062.001
Ident: 0.0

TG METTLER
222-S Laboratory

03-May-95
5/4/95 BOV

Step Analysis
Height - 9.76 mg
-58.70 %
ResidC. 6.86 mg
41.30 %
Dpeak 82.5 °C

wt

15. mg

David W. Smith

~~5-4-95~~ 5/5/95
5-4-95 BOV

50.

100.

150.

200.

°C

WHG-SD-WM-DP-110 REV. 0

NOT AVAILABLE COPY

S95T000582 N2

14.076 mg

Rate: 10.0 °C/min

File: 00064.001

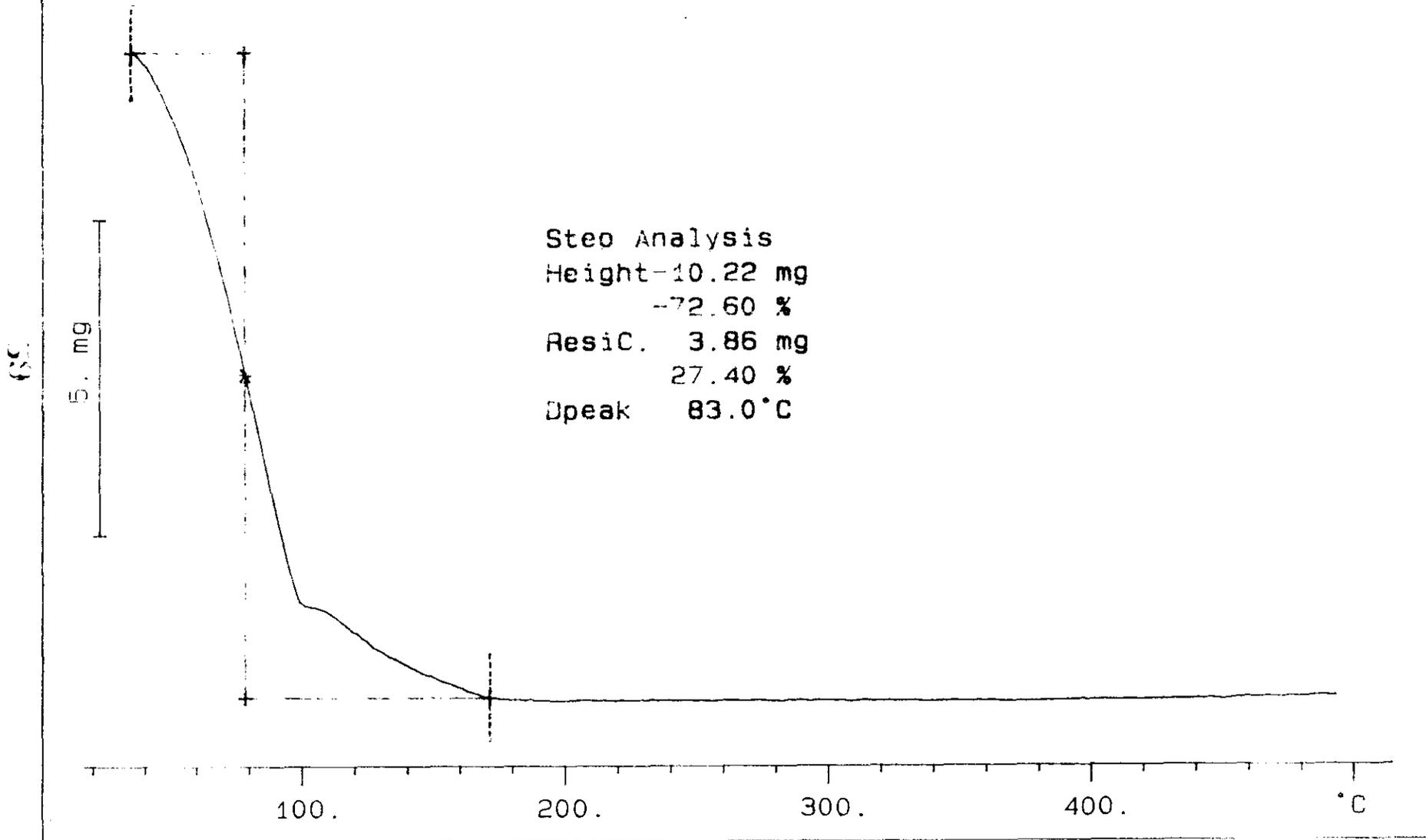
TG

METTLER

04-May-95

Ident: 0.0

222-S Laboratory



WHC-SD-WM-DP-110, REV. 0

BEST AVAILABLE COPY

S95T000582 (DUP) N2

14.208 mg

Rate: 10.0 °C/min

File: 00066.001

TG

METTLER

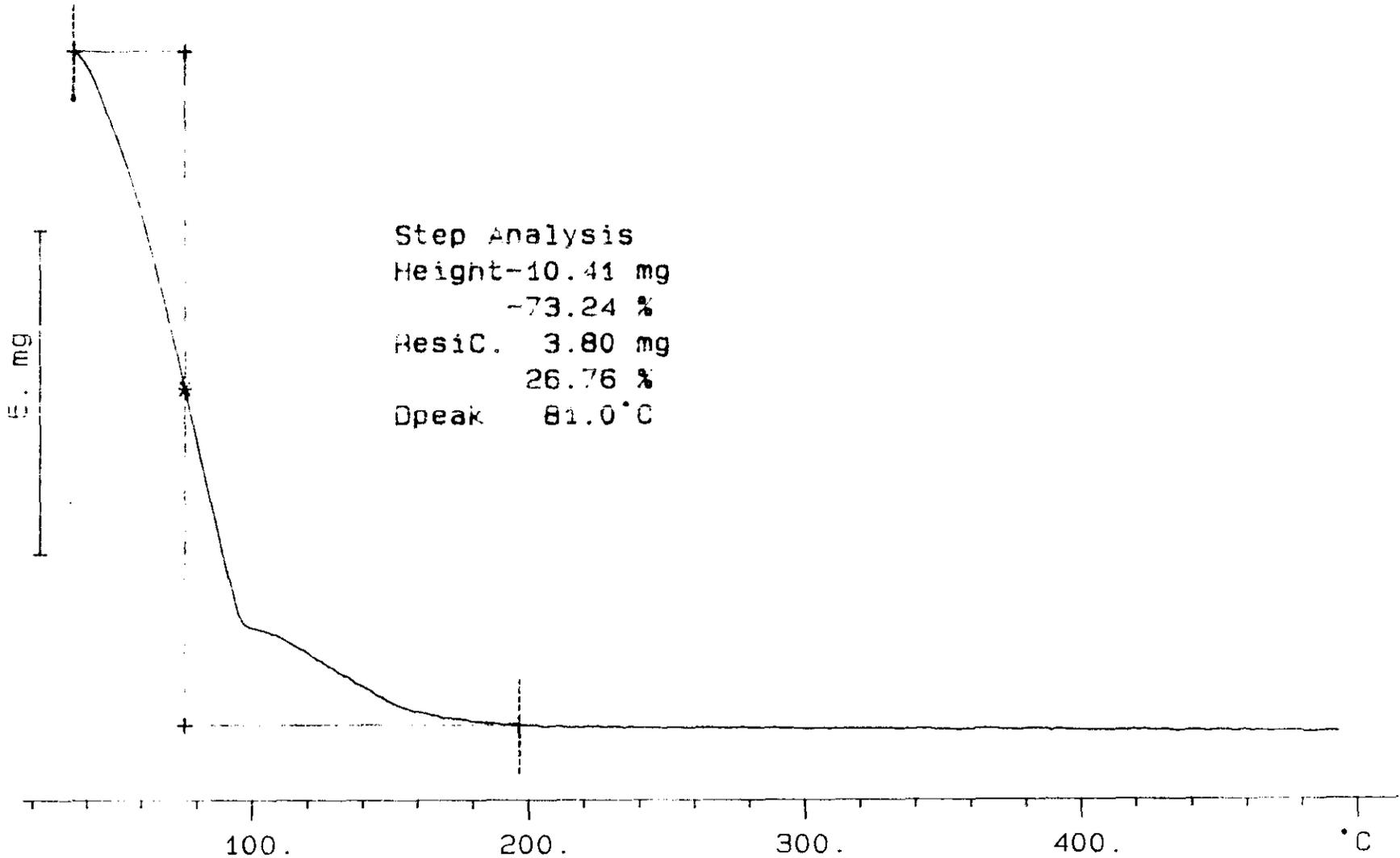
05-May-95

Ident: 0.0

222-S Laboratory

5/4/95 Bdv

610



WHC-SD-WM-DP-110, REV. 0

NOT AVAILABLE COPY

S95T000588 N2

13.149 mg

Rate: 10.0 °C/min

File: 00068.001

Ident: 0.0

TG METTLER

222-S Laboratory

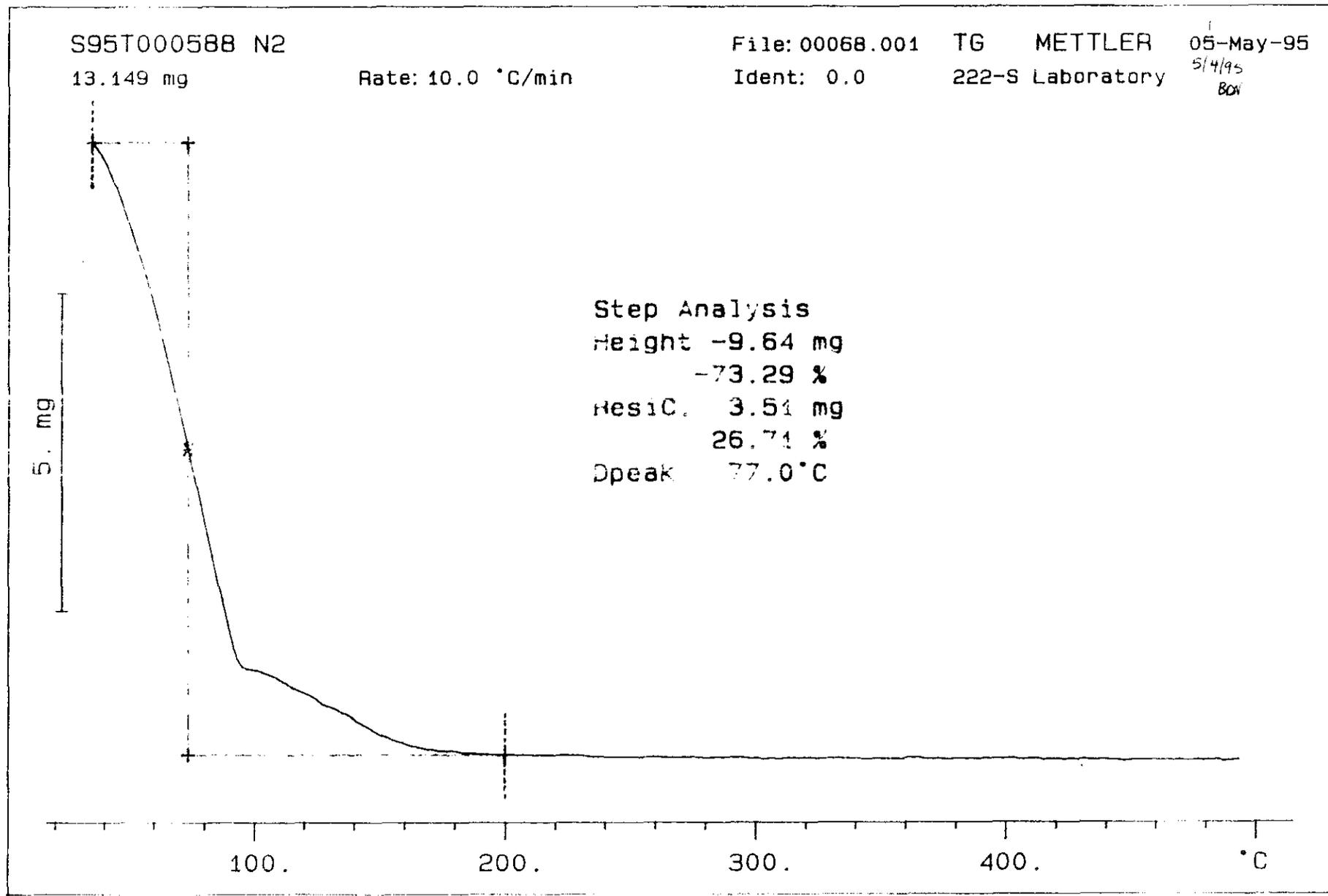
05-May-95

5/4/95
Box

51

5. mg

Step Analysis
Height -9.64 mg
-73.29 %
Resid. 3.51 mg
26.71 %
Dpeak 77.0 °C



WHC-SD-WM-DP-110, REV. 0

UNAVAILABLE COPY

S95T000588 (DUP) N2

13.577 mg

Rate: 10.0 °C/min

File: 00070.001

TG

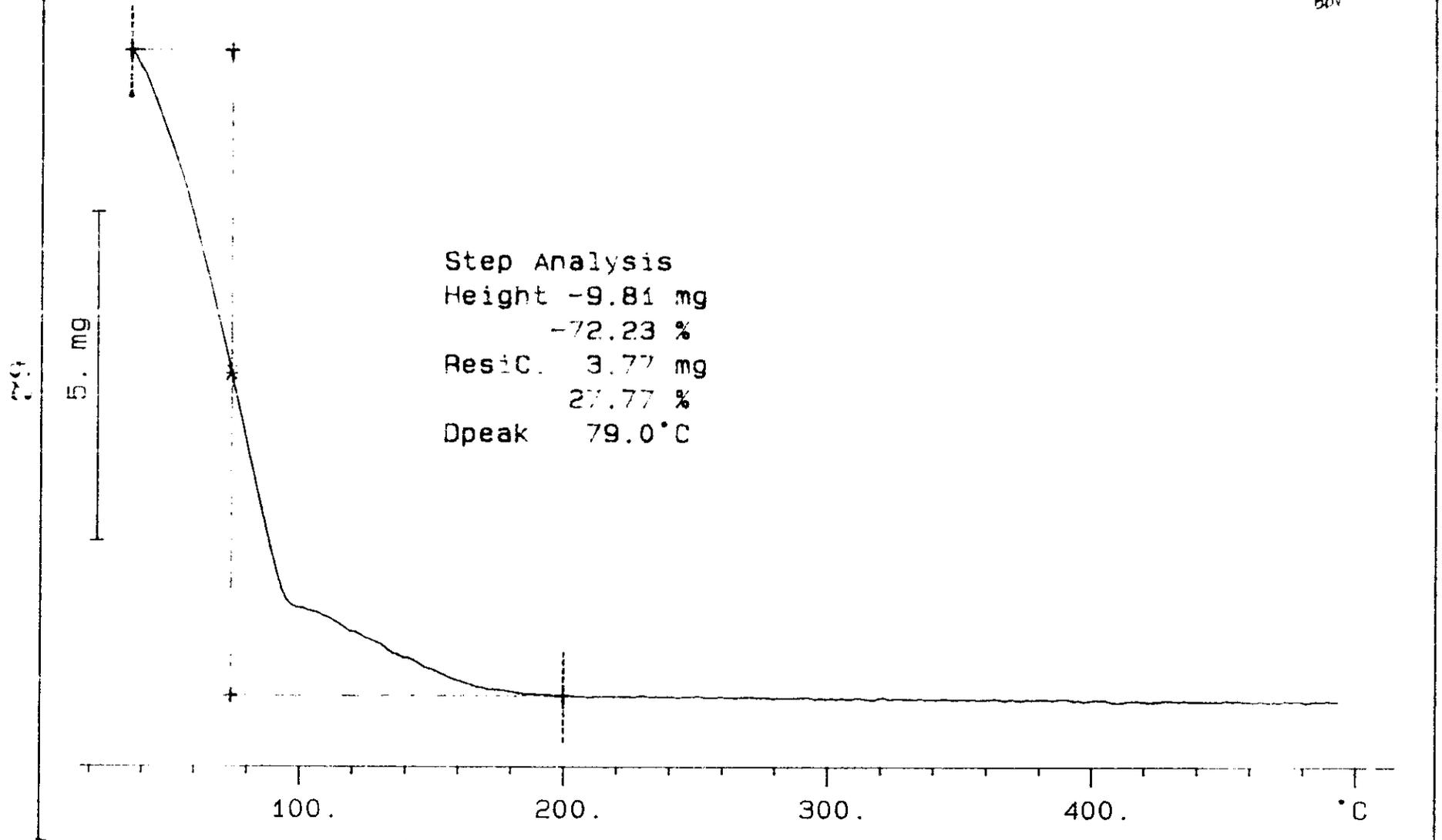
METTLER

05-May-95

Ident: 0.0

222-S Laboratory

5/4/95
BoV



WHC-SD-WM-DP-110, REV 10

LABCORE Data Entry Template for Worklist# 1035

Analyst: [Signature] Instrument: TGA01 Book # 42N8-A

Method: LA-560-112 Rev/Mod TGA A-2

Worklist Comment: Please run U-202 TGA under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA 01	LIQUID	<u>58.7</u>	<u>58.74</u>	N/A	%
95000052	U-202	4 SAMPLE	S95T000621	0	TGA 01	LIQUID	N/A	<u>73.42</u>		%
95000052	U-202	5 DUP	S95T000621	0	TGA 01	LIQUID	<u>73.42</u>	<u>73.44</u>	N/A	%

Final page for worklist # 1035

[Signature] 5-3-95
Analyst Signature Date

[Signature] 5-4-95
Analyst Signature Date

Verified by [Signature] 5-4-95

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 64 TO 66.

BEST AVAILABLE COPY

TGA STD 42N8-A
23.688 mg

Rate: 10.0 °C/min

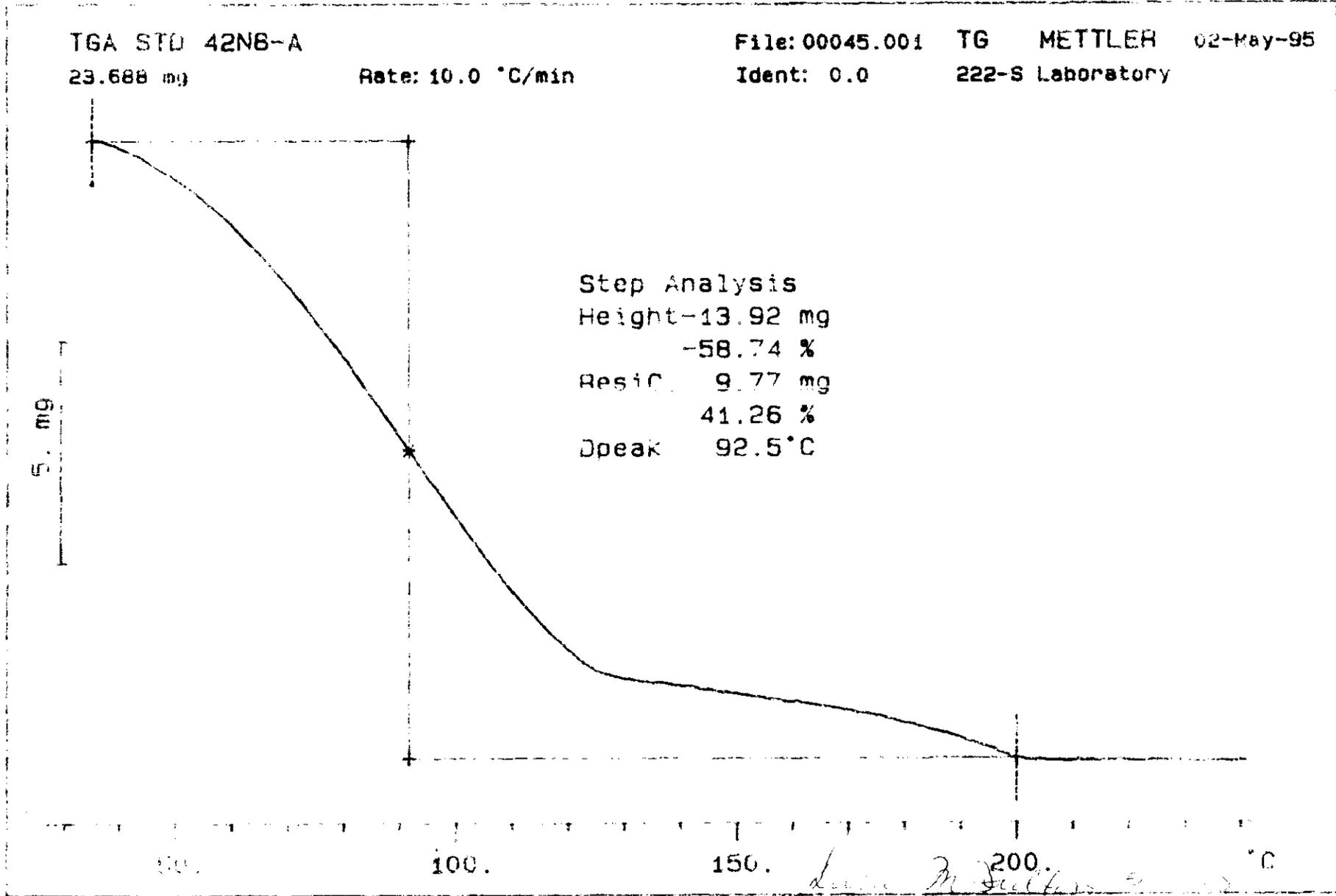
File: 00045.001
Ident: 0.0

TG METTLER 02-May-95
222-S Laboratory

64

5. mg

Step Analysis
Height-13.92 mg
-58.74 %
Resid 9.77 mg
41.26 %
Dpeak 92.5 °C



WHC-SD-WM-DP-110, REV. 10/02

Lucretia M. Sullivan

BEST AVAILABLE COPY

S95T000621 N2

12.456 mg

Rate: 10.0 °C/min

File: 00050.001

Ident: 0.0

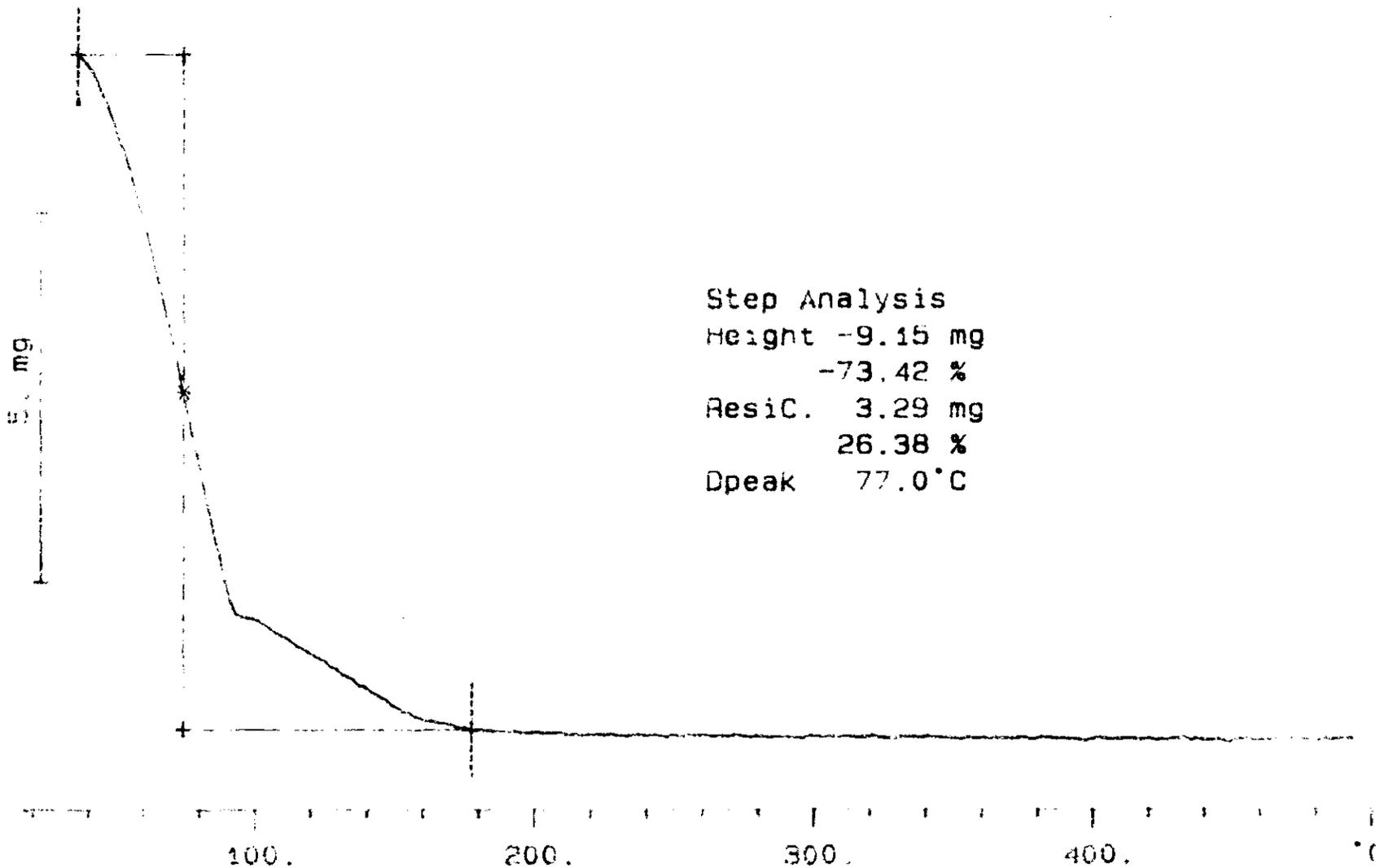
TG

METTLER

03-May-95

222-S Laboratory

6.5



Step Analysis

Height -9.15 mg

-73.42 %

ResidC. 3.29 mg

26.38 %

Dpeak 77.0°C

BEST AVAILABLE COPY

S95T000621 (DUP) N2

File: 00052.001

TG

METTLER

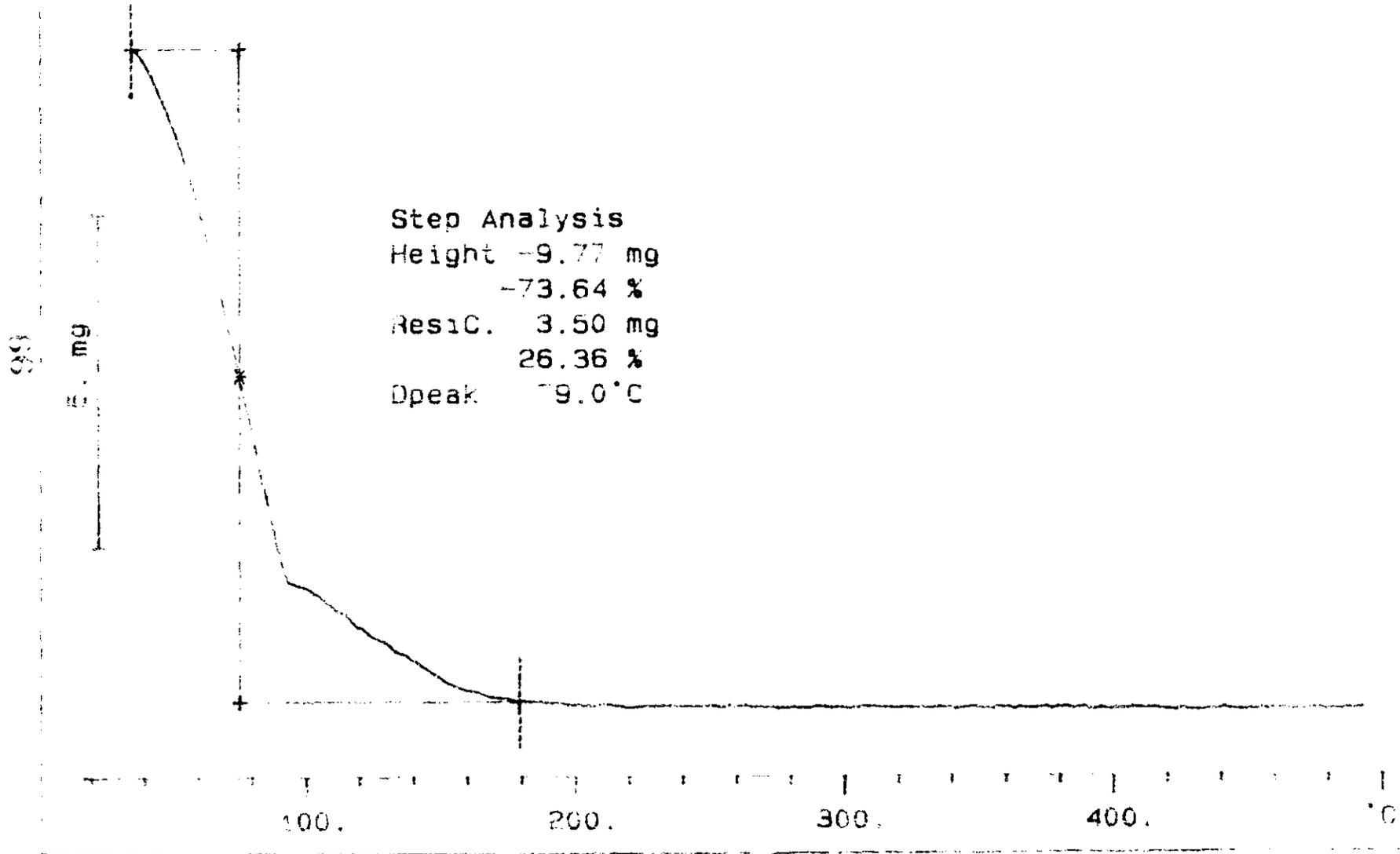
03-May-95

13.270 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory



WHC-SD-WM-DP-110 (REV. 0 5)

LABCORE Data Entry Template for Worklist# 1036

Analyst: Instrument: TGA01 03 Book #

Method: LA-514-114 Rev/Mod

5/5/95
BDV

Worklist Comment: Please run U-202 TGA under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	F A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u> </u>	<u> </u>	N/A	%
95000052	U-202	2 SAMPLE	S95T000636	0	TGA-03	LIQUID	<u>N/A</u>	<u>72.27</u>		%
95000052	U-202	3 DUP	S95T000636	0	TGA-03	LIQUID	<u>72.27</u>	<u>72.23</u>	N/A	%
95000052	U-202	4 SAMPLE	S95T000654	0	TGA-03	LIQUID	<u>N/A</u>	<u> </u>		%
95000052	U-202	5 DUP	S95T000654	0	TGA-03	LIQUID	<u> </u>	<u> </u>	N/A	%

Final page for worklist # 1036

See attached for signatures

Analyst Signature Date

[Signature] 5/4/95

Analyst Signature Date

Verified by *Blandina Valenzuela* 5/5/95

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 1036

Analyst: SMF Instrument: TGA01 Book # 42A3-A

Method: ~~LA-500-112~~ Rev/Mod LA-514-114/SE
SMF 5/5/95 Bdv

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID			N/A	%
95000052	U-202	2 SAMPLE	S95T000636 0		TGA-01	LIQUID	N/A			%
95000052	U-202	3 DUP	S95T000636 0		TGA-01	LIQUID			N/A	%
95000052	U-202	4 SAMPLE	S95T000654 0		TGA-01	LIQUID	N/A			%
95000052	U-202	5 DUP	S95T000654 0		TGA-01	LIQUID			N/A	%

Final page for worklist # 1036

Ausie M. Dutton 5-3-95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

S95T000636 - Bright yellow liquid
S95T000654 - Clear colorless liquid

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA

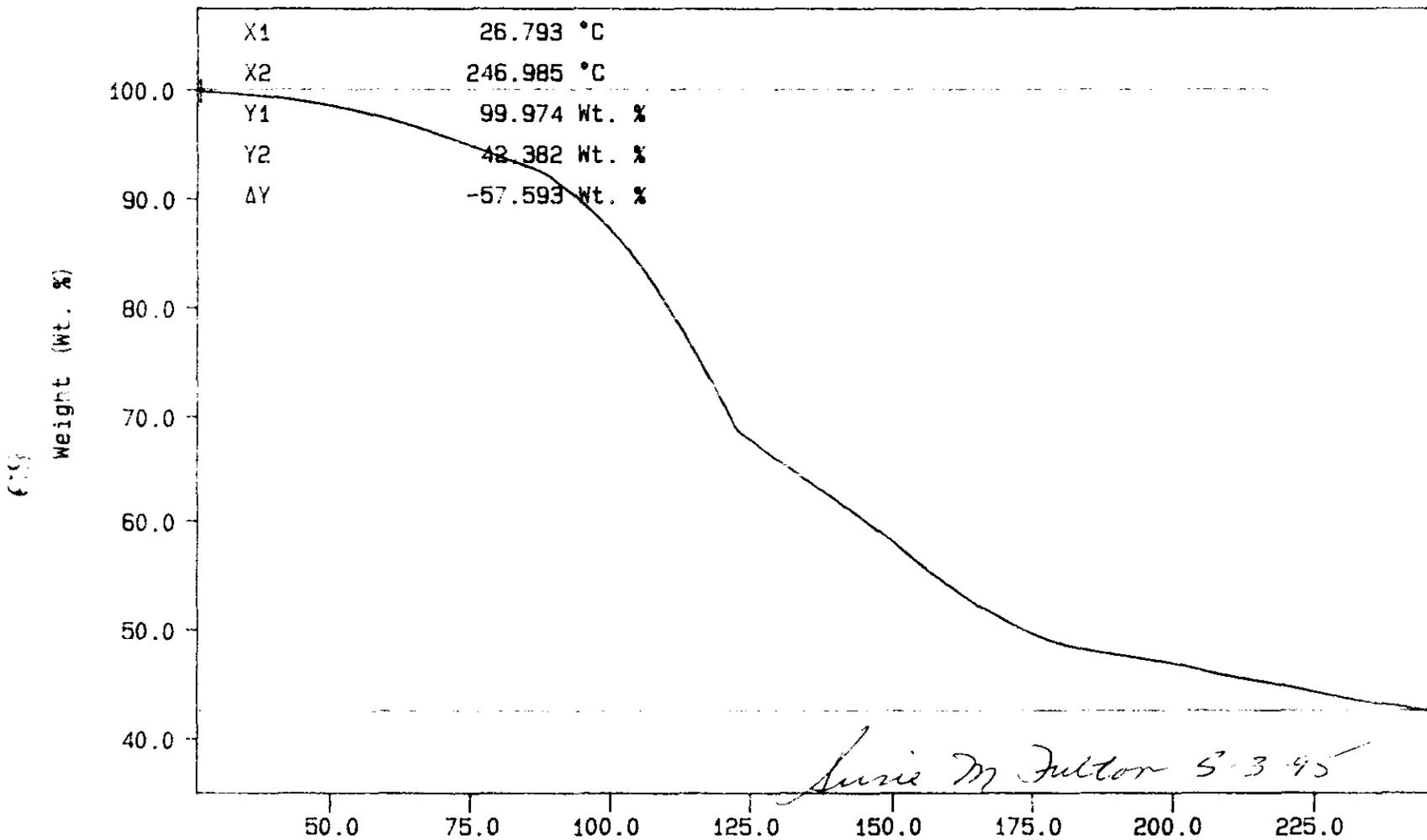
File info: TER050301 Wed May 3 08:58:12 1995

Sample Weight: 18.839 mg

42NBA Terliq

TEST AVAILABLE COPY

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 69 TO 73.



WHC-SD-WM-DP-110, REV.0

N2

TEMP1: 35.0 °C
TEMP2: 250.0 °C

TIME1: 0.0 min RATE1: 10.0 C/min

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 3 09:03:07 1995

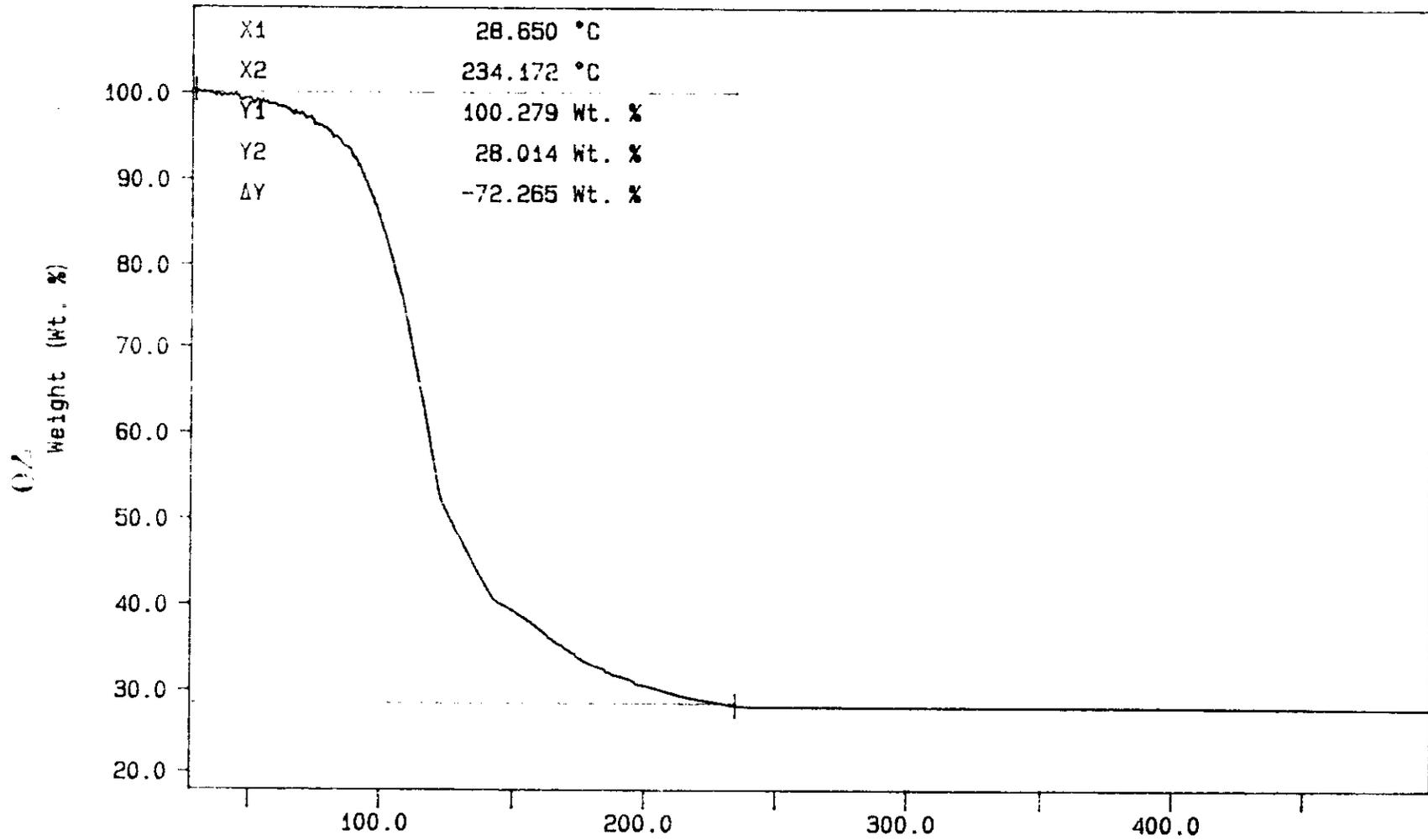
Curve 1: TGA

File info: SAM050303 Wed May 3 12: 47: 52 1995

Sample Weight: 13.753 mg

S95T000636, 10C/min

BEST AVAILABLE COPY



WMC-SD-WM-DP-110, REV.0

5 16 1995

N2
TEMP1: 35.0 C
TEMP2: 500.0 C
TIME1: 0.0 min RATE1: 10.0 C/min

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 3 13: 19: 43 1995

Curve 1: TGA

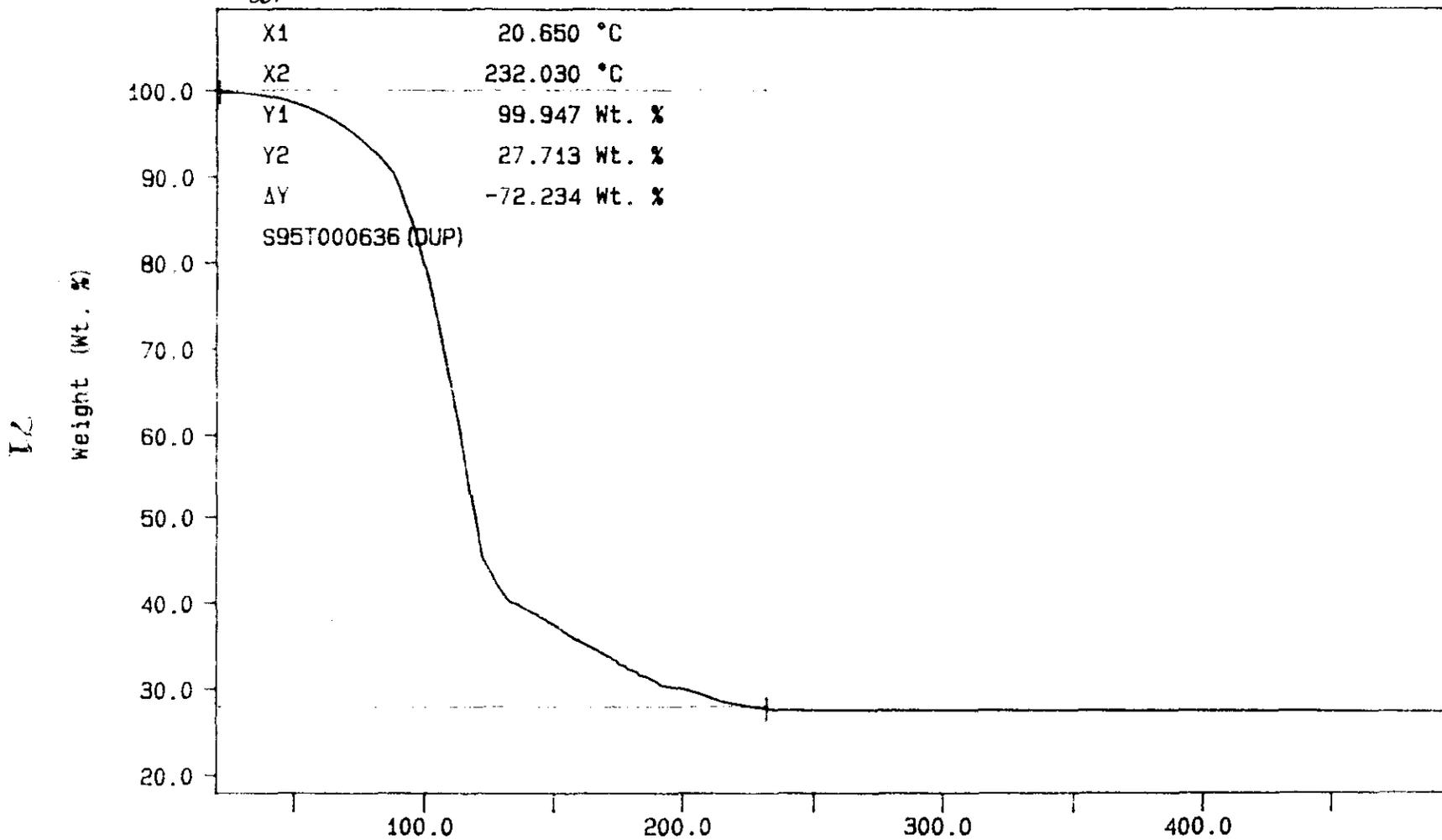
File info: SAM050304 Wed May 3 14: 20: 06 1995

Sample Weight: 13.408 mg

S95T000636, 10C/min

(Dup) 5/5/95
BDV

BEST AVAILABLE COPY



WHC-SD-MM-DP-110, REV. 0

N2
TEMP1: 35.0 C
TEMP2: 500.0 C
TIME1: 0.0 min
RATE1: 10.0 C/min

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 3 14: 32: 05 1995

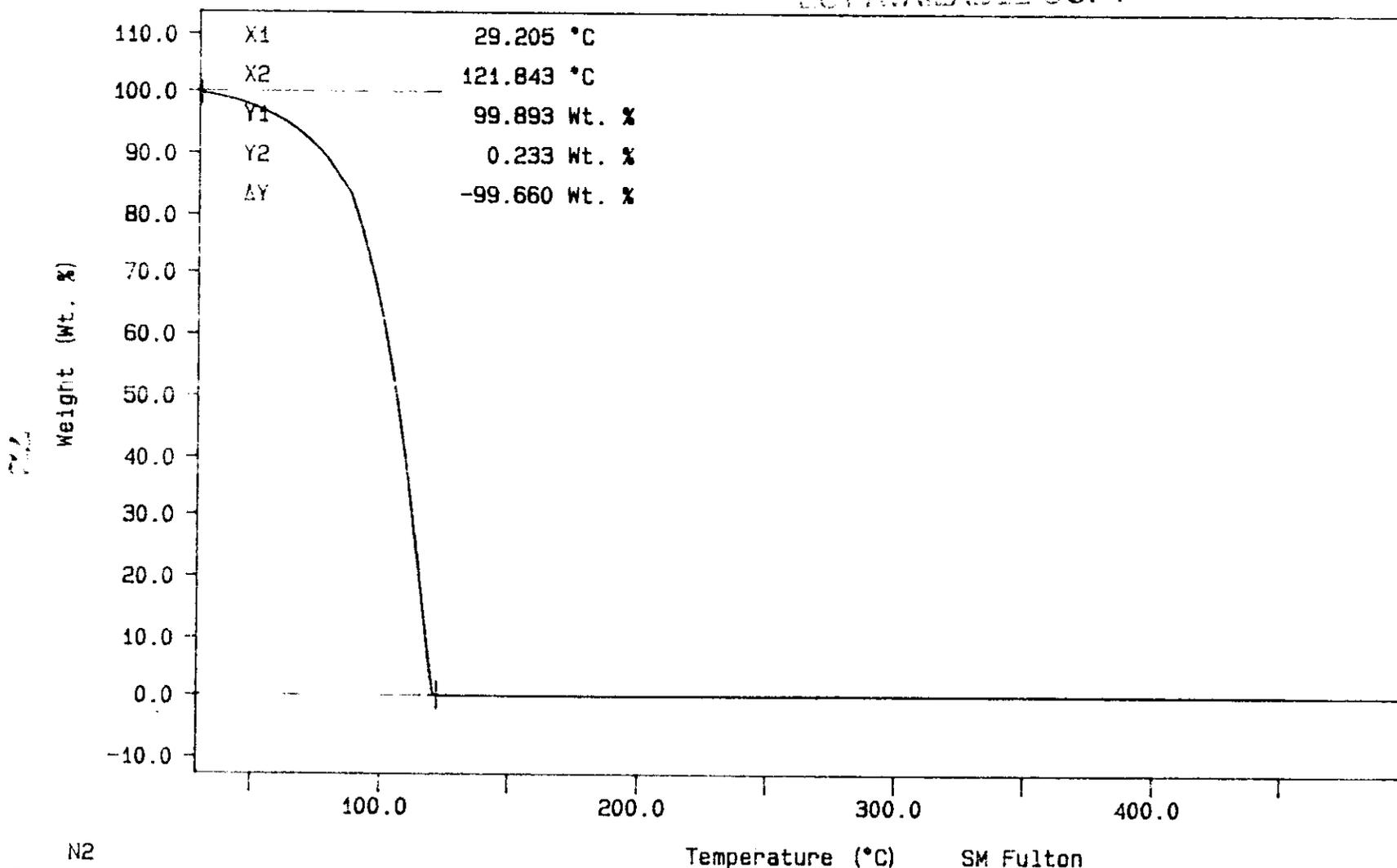
Curve 1: TGA

File info: SAM050301 Wed May 3 15: 25: 06 1995

Sample Weight: 9.448 mg

S95T000654, 10C/min

TEST AVAILABLE COPY



WHC-SD-MM-DP-110, REV. 0

1995

N2
TEMP1: 35.0 C
TEMP2: 500.0 C
TIME1: 0.0 min RATE1: 10.0 C/min

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 3 15: 38: 13 1995

Curve 1: TGA

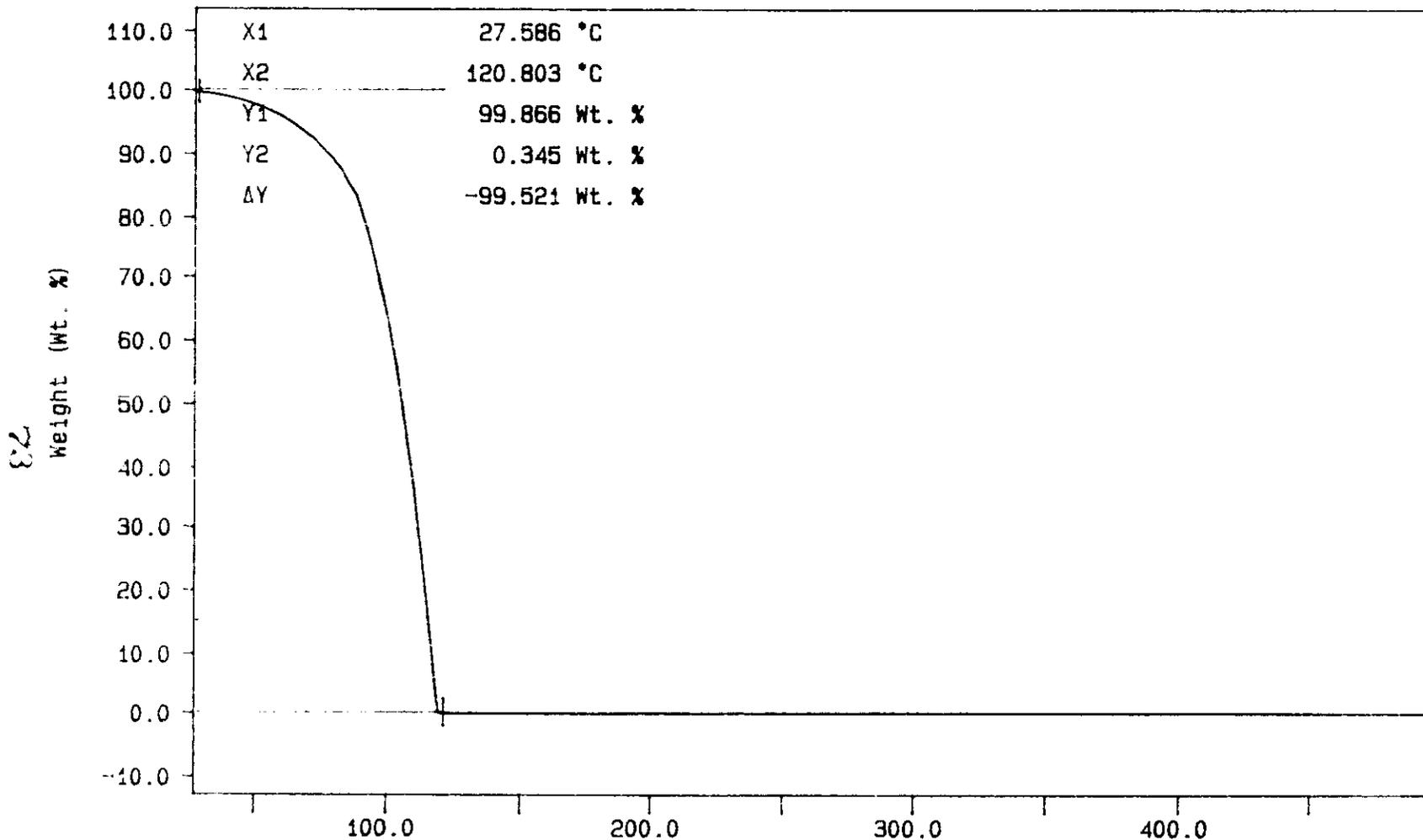
File info: SAM050302 Wed May 3 11:42:25 1995

Sample Weight: 8.704 mg

S95T000654 (DUP), 10C/min

(DUP)

BEST AVAILABLE COPY



WHC-SD-WM-DP-110, REV. 0

N2

TEMP1: 38.0 C
TEMP2: 500.0 C

TIME1: 0.0 min RATE1: 10.0 C/min

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 3 11:47:00 1995

LABCORE Data Entry Template for Worklist# 1047

Analyst: SNE Instrument: TGA01 Book # 42NE A

Method: LA-560-112 Rev/Mod 1.2

Worklist Comment: Please run U-202 TGA under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA 01	SOLID	<u>59.19</u>	<u>58.31</u>	N/A	%
95000039	U-202	2 SAMPLE	S95T000584	0	TGA 01	SOLID	N/A	<u>25.47</u>		%
95000039	U-202	3 DUP	S95T000584	0	TGA 01	SOLID	<u>25.99</u>	<u>26.24</u>	N/A	%
95000039	U-202	4 SAMPLE	S95T000590	0	TGA 01	SOLID	N/A	<u>43.64</u>		%
95000039	U-202	5 DUP	S95T000590	0	TGA 01	SOLID	<u>43.64</u>	<u>38.71</u>	N/A	%
95000039	U-202	6 DUP2	S95T000590	0	TGA 01	SOLID	<u>43.64</u>	<u>36.88</u>	N/A	%

Final page for worklist # 1047

See attached for signatures
Analyst Signature _____ Date _____

Data entered + verified
Blandina Valenzuela 4/25/95
Analyst Signature _____ Date _____

Data Entry Comments: S95T000584 produced a second weight loss step of 11.93% at 381.0°C
S95T000590 produced a second weight loss step of 7.22% at 371.0°C
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 1047

Analyst: SMF Instrument: TGA01 Book # 42 N/A

Method: LA-560-112 Rev/Mod A-3

Worklist Comment: Please run U-202 TGA under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
95000039	U-202	2 SAMPLE	S95T000584	0	TGA-01	SOLID	N/A			%
95000039	U-202	3 DUP	S95T000584	0	TGA-01	SOLID			N/A	%
95000039	U-202	4 SAMPLE	S95T000590	0	TGA-01	SOLID	N/A			%
95000039	U-202	5 DUP	S95T000590	0	TGA-01	SOLID			N/A	%

Final page for worklist # 1047

Smuelton 4-24-95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

S95T000584 - light yellow thick liquid
in clear ^{4.20115} thin upper phase
S95T000590 - light yellow liquid at base (25) clear crystals

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 76 TO 81.

TEST ANALYSIS COPY

TGA STD 42N8-A

18.145 mg

Rate: 10.0 °C/min

File: 00017.001

TG

METTLER

23-Apr-95

Ident: 0.0

222-S Laboratory

92

5. mg

Step Analysis

Height 10.58 mg

-58.31 %

Res1C. 7.56 mg

41.69 %

Dpeak 85.8 °C

50.

100.

150.

200.

°C

John M. Feltner 24/95

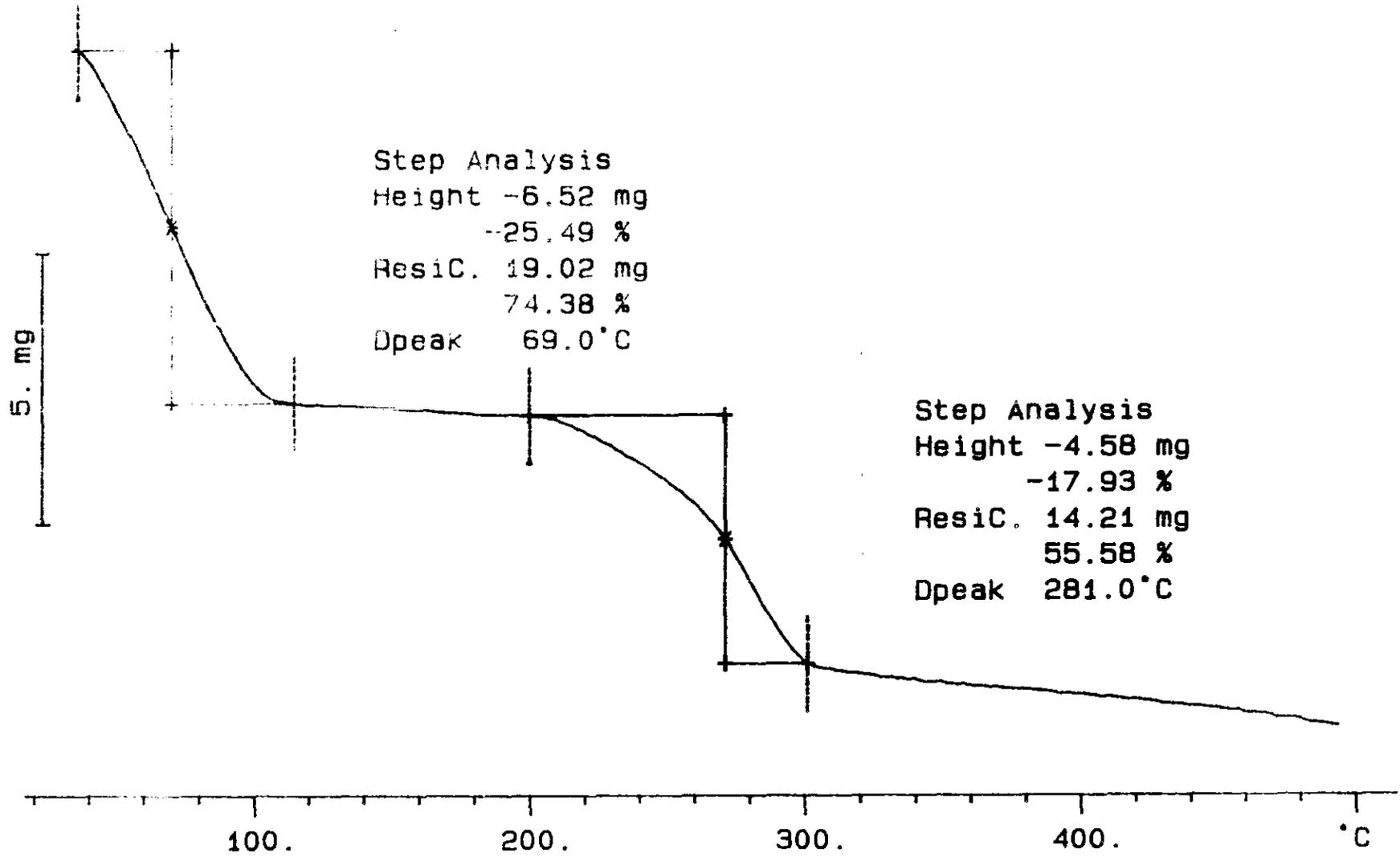
NHC-SD-W/-DP-110, REV. 0.3

BEST AVAILABLE COPY

S95T000584 N2
25.575 mg

Rate: 10.0 °C/min

File: 00019.001 TG METTLER 23-Apr-95
Ident: 0.0 222-S Laboratory



2.2

W-C-SD-MM-3-110, REV. 0

BEST AVAILABLE COPY

S95T000584 (DUP) N2

32.671 mg

Rate: 10.0 °C/min

File: 00021.001

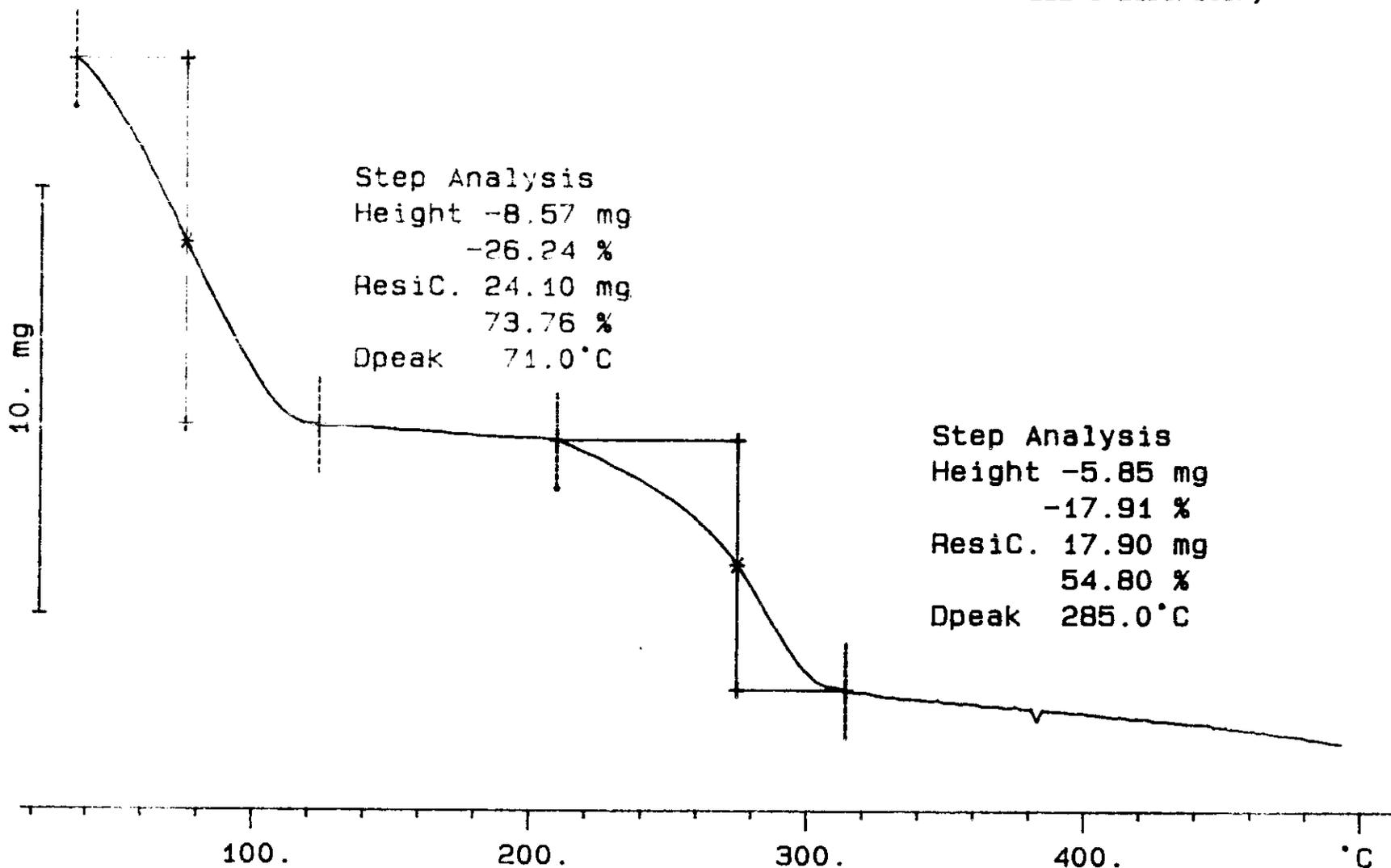
TG

METTLER

24-Apr-95

Ident: 0.0

222-S Laboratory



WHC-SD-WM-DF-110, REV. 0

UNAVAILABLE COPY

S95T000590 N2

19.274 mg

Rate: 10.0 °C/min

File: 00023.001

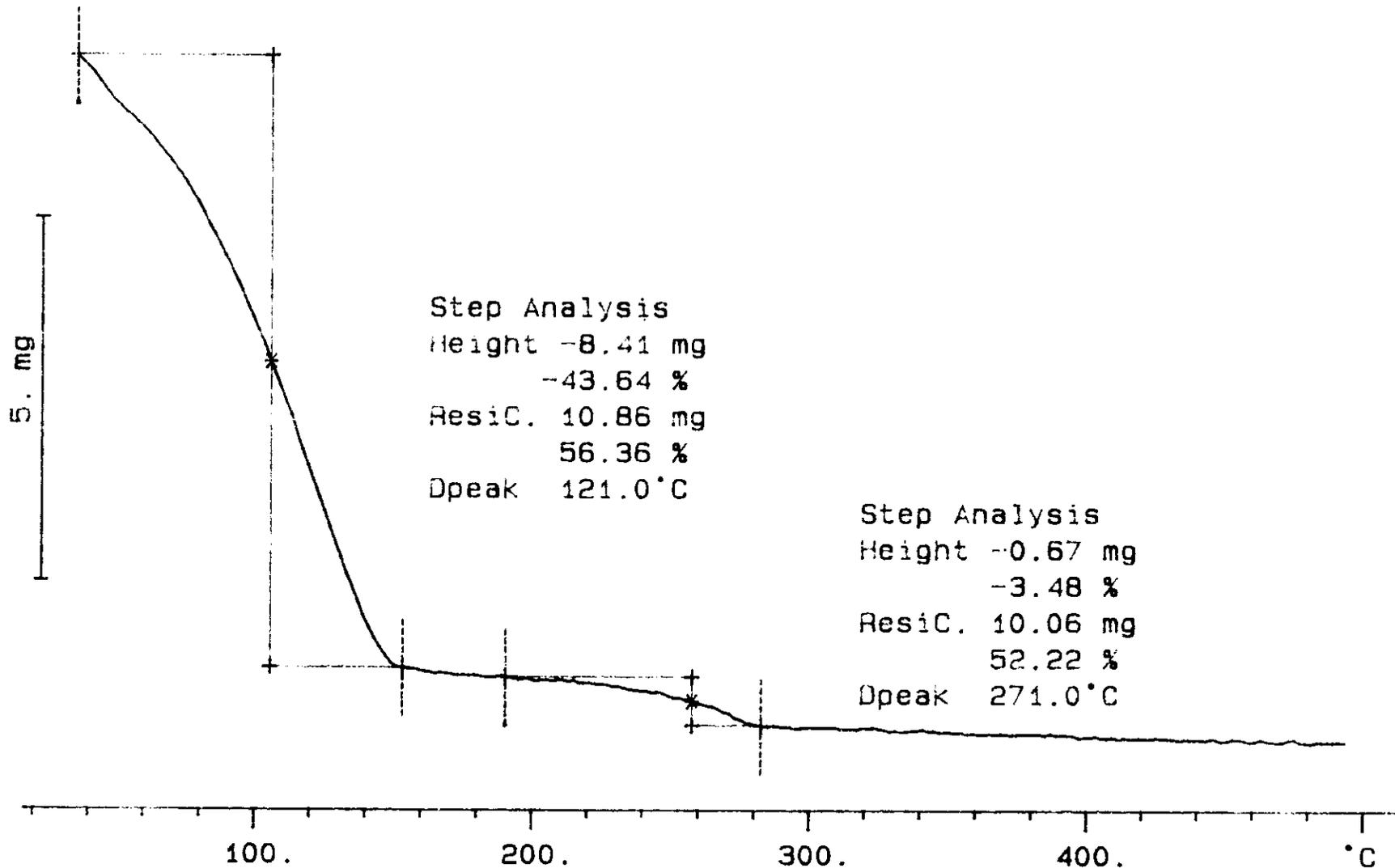
TG

METTLER

24-Apr-95

Ident: 0.0

222-S Laboratory



WHC-SD-WM-IDP-110, REV. 0

AVAILABLE COPY

S95T000590 (DUP) N2

19.861 mg

Rate: 10.0 °C/min

File: 00025.001

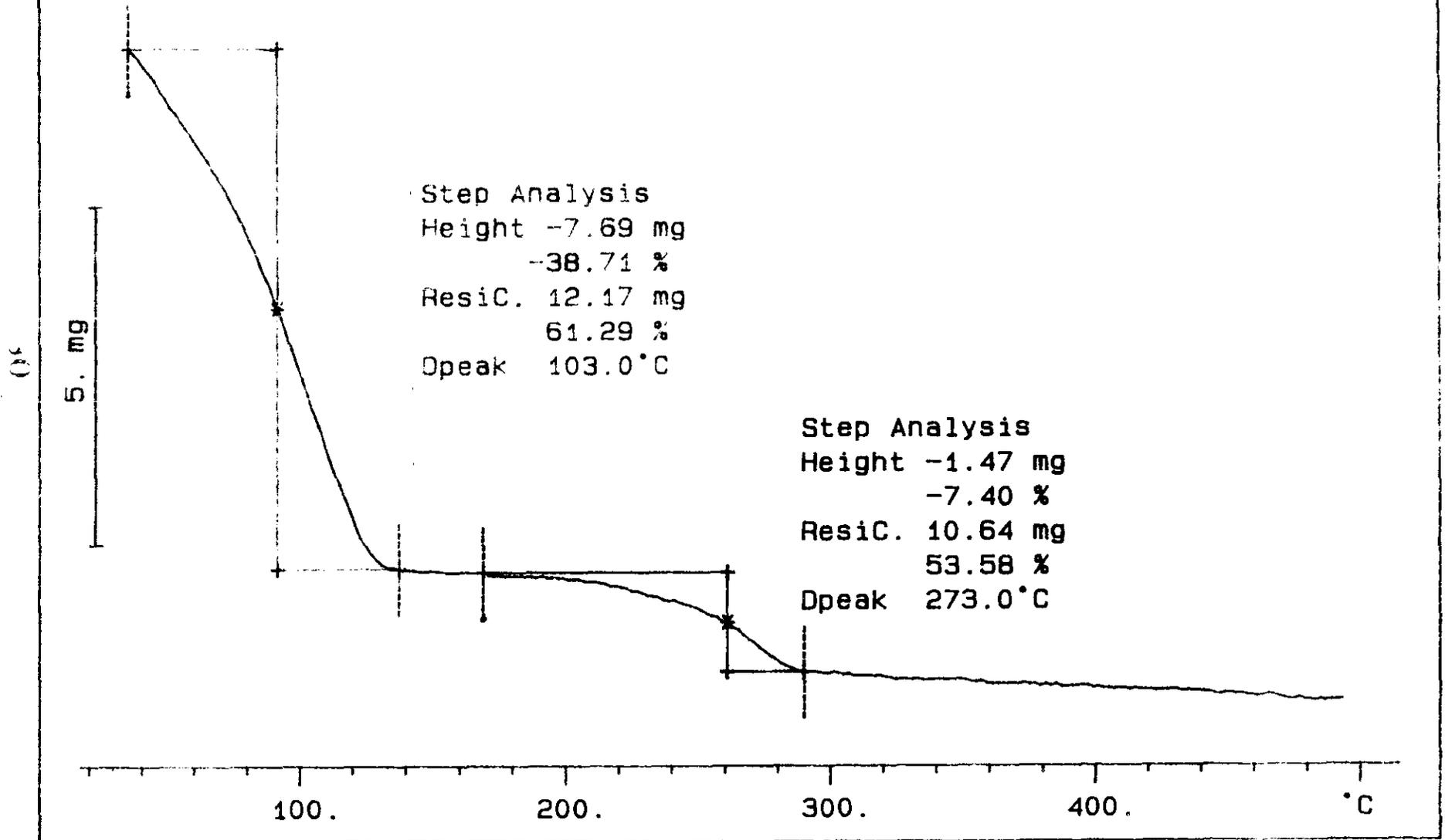
TG

METTLER

24-Apr-95

Ident: 0.0

222-S Laboratory



WHC-SD-WM-10-110, REV. 01/11/10

UNAVAILABLE COPY

S95T000590 (DUP2) N2

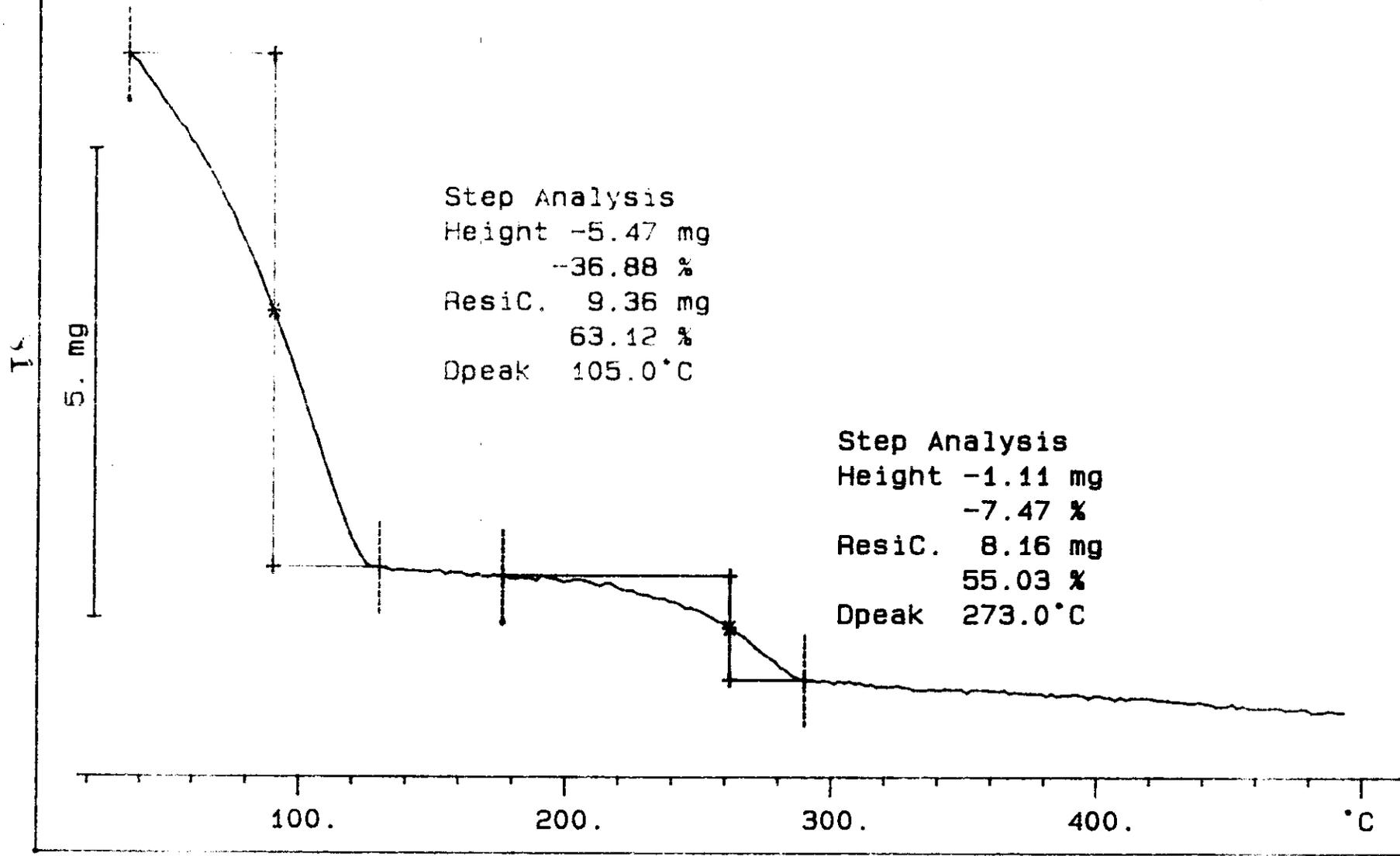
File: 00027.001 TG METTLER 24-Apr-95

14.826 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory



WHC-SD-WM-IDP-110, REV. 0

LABCORE Data Entry Template for Worklist# 1048

Analyst: ASP Instrument: TGA01 Book # 42N8-A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.14</u>	<u>59.11</u>	N/A	%
95000039	U-202	2 SAMPLE	S95T000598	0	TGA-01	SOLID	N/A	<u>22.83</u>		%
95000039	U-202	3 DUP	S95T000598	0	TGA-01	SOLID	<u>22.87</u>	<u>22.80</u>	N/A	%

Final page for worklist # 1048

Anthony Puroto 5-3-95
Analyst Signature Date

[Signature] 5-4-95
Analyst Signature Date

Verified by Blandina Valenzuela 5/4/95

Data Entry Comments:

Sample 11 found to be a duplicate of sample 10
N/A at 2976

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

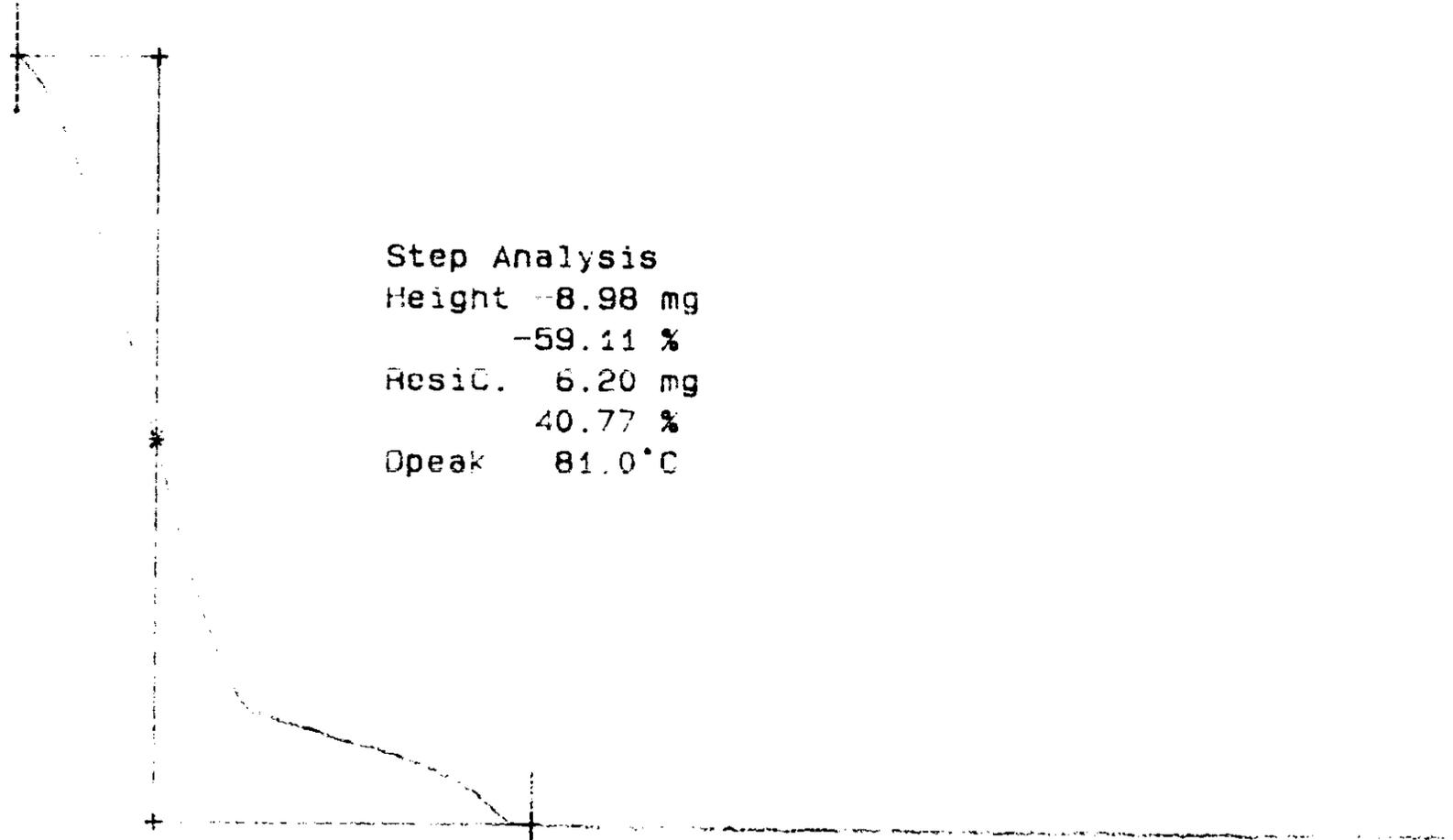
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 85 TO 85.

TEST AVAILABLE 1577

100-230-4216-A
10.111 mg

Rate: 10.0 °C/min

File: 00053.001 TC MEYER 24-May-95
Junt: 0.0 222-S Laboratory



Step Analysis
Height 8.98 mg
-59.11 %
ResidC. 6.20 mg
40.77 %
Dpeak 81.0 °C

83

100. 200. 300.

400 (V.H. ...)

W/C-SO-MM-OP-110, REV.0

UNAVAILABLE COPY

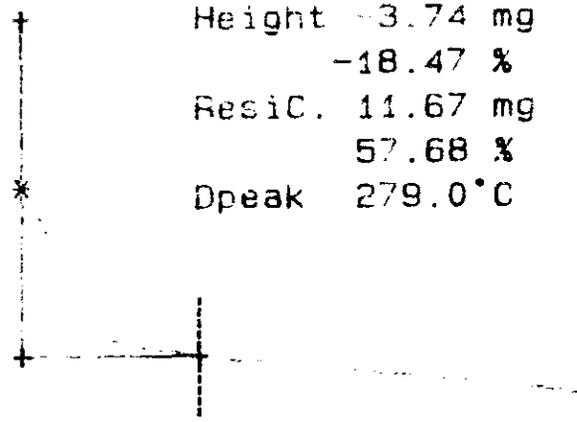
File: 000001001 TC
Date: 01/10/2001 22:22:10



Step Analysis
Height -4.63 mg
-22.87 %
ResiC. 15.59 mg
77.01 %
Dpeak 61.0°C



Step Analysis
Height -3.74 mg
-18.47 %
ResiC. 11.67 mg
57.68 %
Dpeak 279.0°C



WHC-SD-WM-DP-110,REV.02

UNAVAILABLE COPY

S95T000598 DUP N2

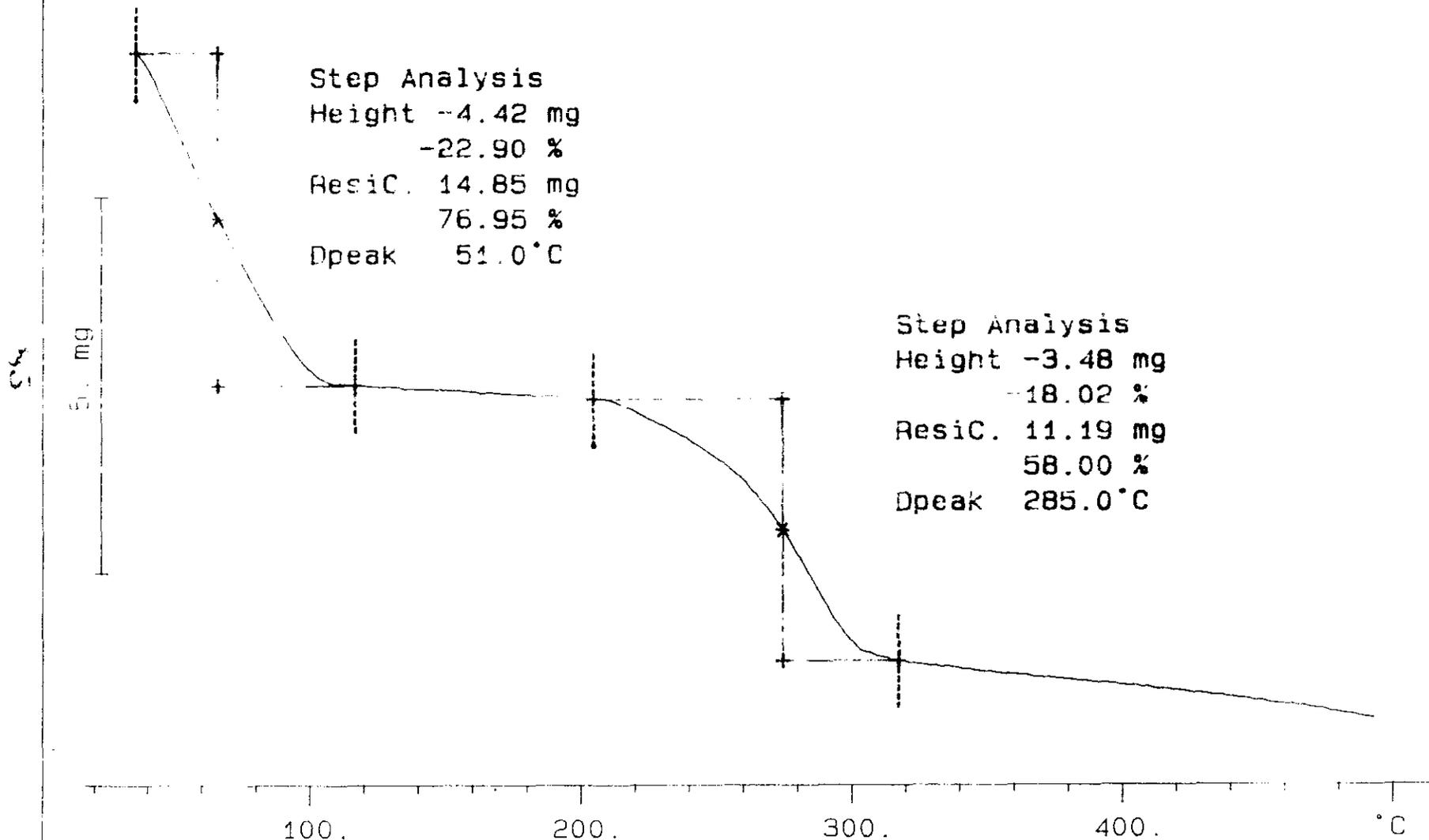
File: 00057.001 TG METTLER 03-May-95

19.294 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory



WHC-SD-WM-DP-0, REV. 0

LABCORE Data Entry Template for Worklist# 1050

Analyst: ADP Instrument: TGA01 Book # 42N8-A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run U-202 TGA under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	59.19	59.08	N/A	%
95000052	U-202	2 SAMPLE	S95T000630	0	TGA-01	SOLID	N/A	24.11		%
95000052	U-202	3 DUP	S95T000630	0	TGA-01	SOLID	24.11	18.90	N/A	%
95000052	U-202	4 TRIPL	S95T000630	0	TGA-01	SOLID	24.11	17.14	N/A	%

Final page for worklist # 1050

See attached for signatures!
Analyst Signature _____ Date _____

[Signature]
Analyst Signature _____ Date 5/5/95 BDV

Verified by *Blandina Valenzuela* 5/5/95

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 1050

Analyst: ADP Instrument: TGA01 Book # 42N3-A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run U-202 TGA under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA 01	SOLID	<u>57.11</u>	<u>57.11</u>	<u>5/5/95</u>	<u>BDV</u>
95000052	U-202	4 SAMPLE	S95T000630	0	TGA 01	SOLID	<u>N/A</u>		<u>N/A</u>	%
95000052	U-202	5 DUP	S95T000630	0	TGA 01	SOLID			<u>N/A</u>	%

Final page for worklist # 1050

William Purinton 5-3-95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

NOT FINAL

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 88 TO 92.

16A 110 12NH-A
15.10 mg

Rate: 10.0 °C/min

File: 00053.001 76 METTLER 15-May-91
Ident: 0.0 222-S Laboratory



Step Analysis
Height -8.98 mg
-59.08 %
Res1C. 6.20 mg
40.80 %
Dpeak 81.0 °C



WHC-SD-WM-DP-110 REV. 0

BEST AVAILABLE COPY

20070506.30 1P
23.70000

Rate: 10.0 °C/min

File: 00054.001 16 METTLER 1131 Mly-MS
Ident: 0.0 222-2 Laboratory

Step Analysis
Height -5.73 mg
-24.11 %
ResiC. 17.99 mg
75.76 %
Dpeak 65.0 °C

Step Analysis
Height -4.42 mg
-18.61 %
ResiC. 13.30 mg
56.02 %
Dpeak 283.0 °C

WMC-SD-WM-DP-110, REV. 0

NOT AVAILABLE COPY

5/5/95

TGA STD 42N8-A

File: 00062.001

TG

METTLER

03-May-95

16.621 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis

Height -9.76 mg

-58.72 %

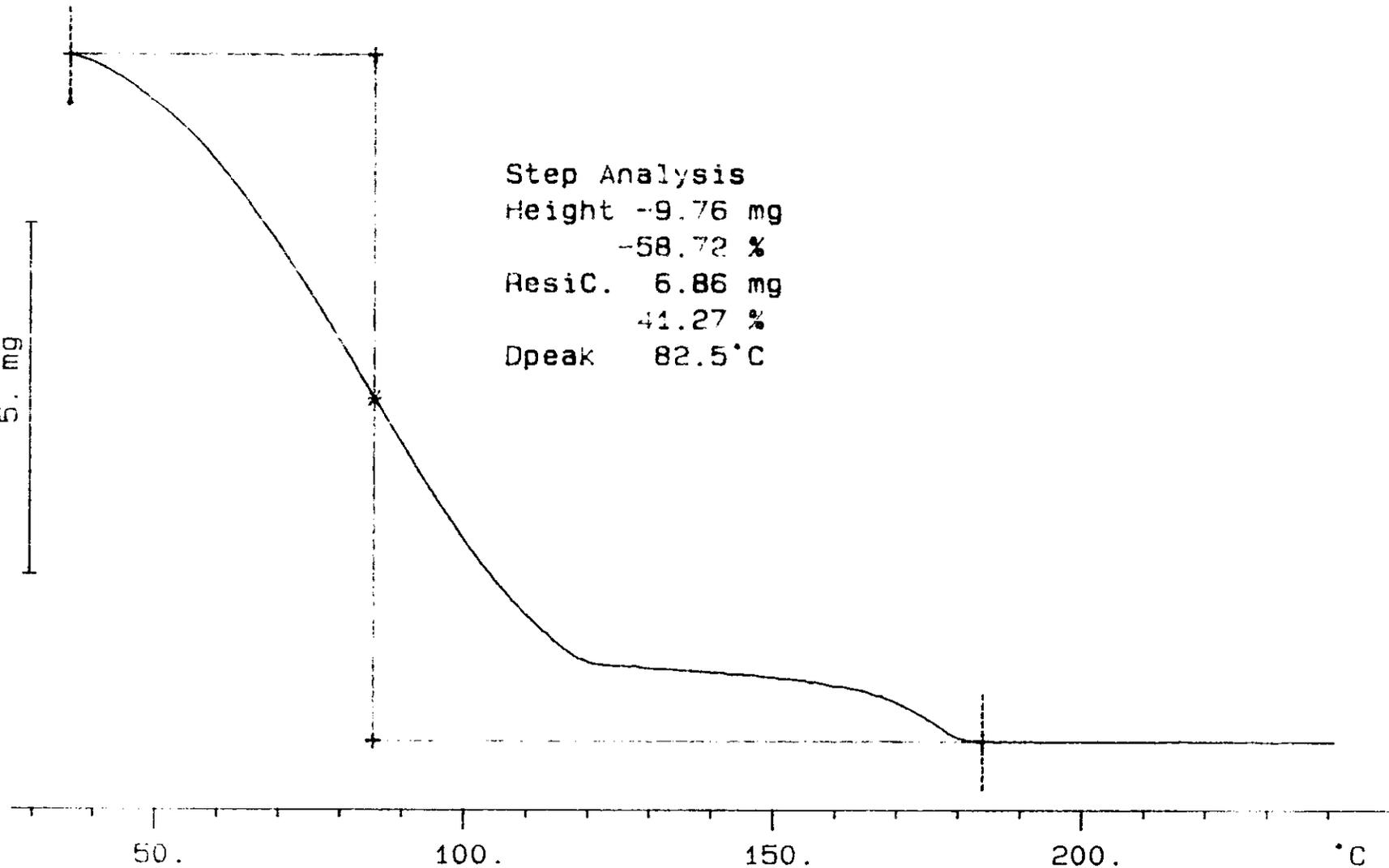
Resid. 6.86 mg

41.27 %

Dpeak 82.5 °C

16

5. mg



WHC-SD-WM-DP-110, REV. 0

UNAVAILABLE COPY

S95T000630 (TRIPL) N2

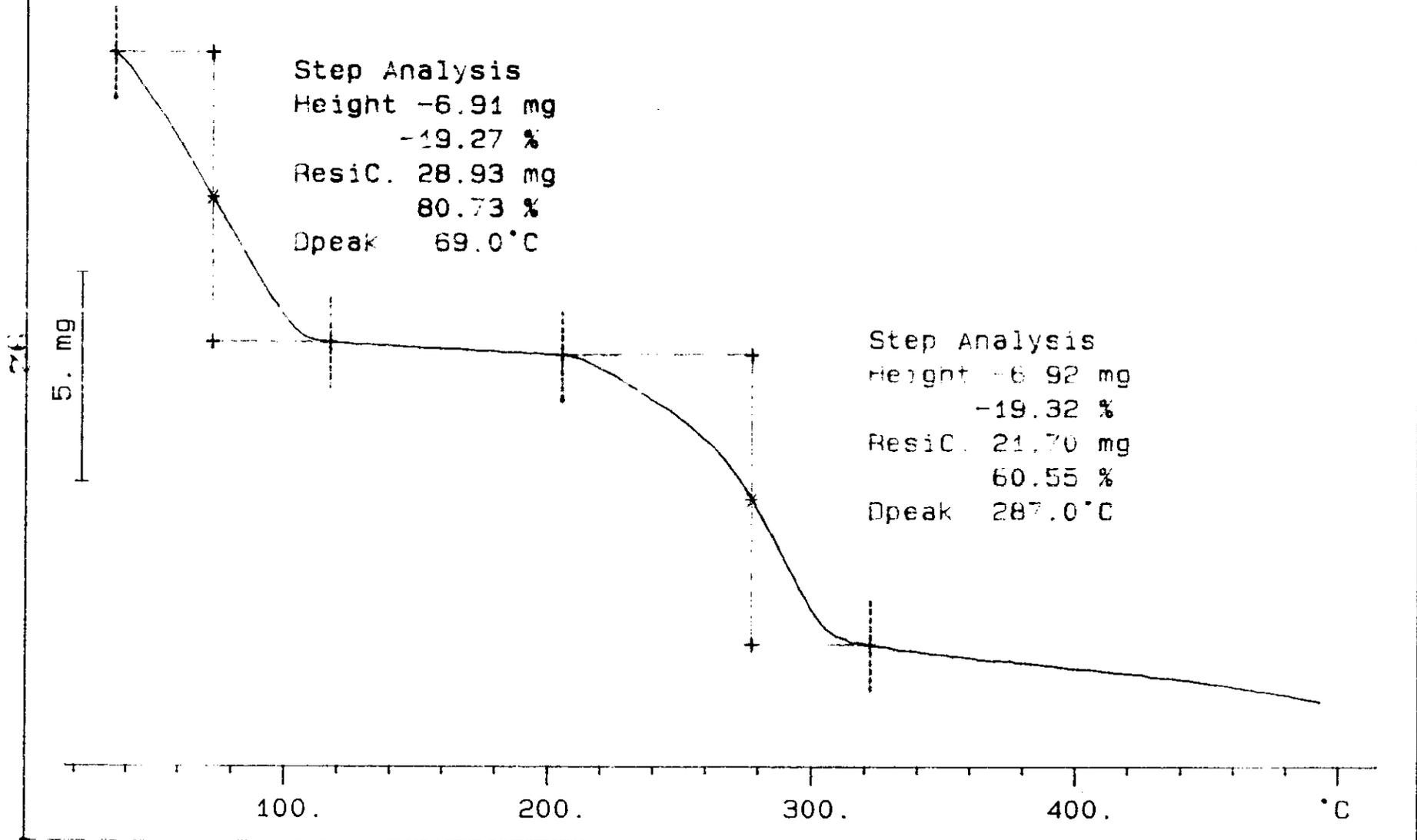
File: 00071.001 TG METTLER 05-May-95

35.831 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory



WHC-SD-WM-DP-110, REV. 0, 1/75

LABCORE Data Entry Template for Worklist# 1051

Analyst: MF Instrument: TGA01 Book # 42NE-A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run U-202 TGA under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA 01	SOLID	<u>59.19</u>	<u>58.85</u>	<u>N/A</u>	%
9500052	U-202	2 SAMPLE	S95T000632	0	TGA 01	SOLID	<u>N/A</u>	<u>24.45</u>		%
9500052	U-202	3 DUP	S95T000632	0	TGA 01	SOLID	<u>24.45</u>	<u>22.24</u>	<u>N/A</u>	%

Final page for worklist # 1051

Blandina Valenzuela for SM Fulton 5-2-95
Analyst Signature Date

[Signature] 5/2/95
Analyst Signature Date

Verified by Blandina Valenzuela 5-2-95

Data Entry Comments: S95T000632 light yellow black material w/ thin layer of water. The sample also possessed a second weight loss step of 18.78% at 309.0°C

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 94 TO 96.

TEST ANALYSIS COPY

TGA STD 42N8-A
14.470 mg

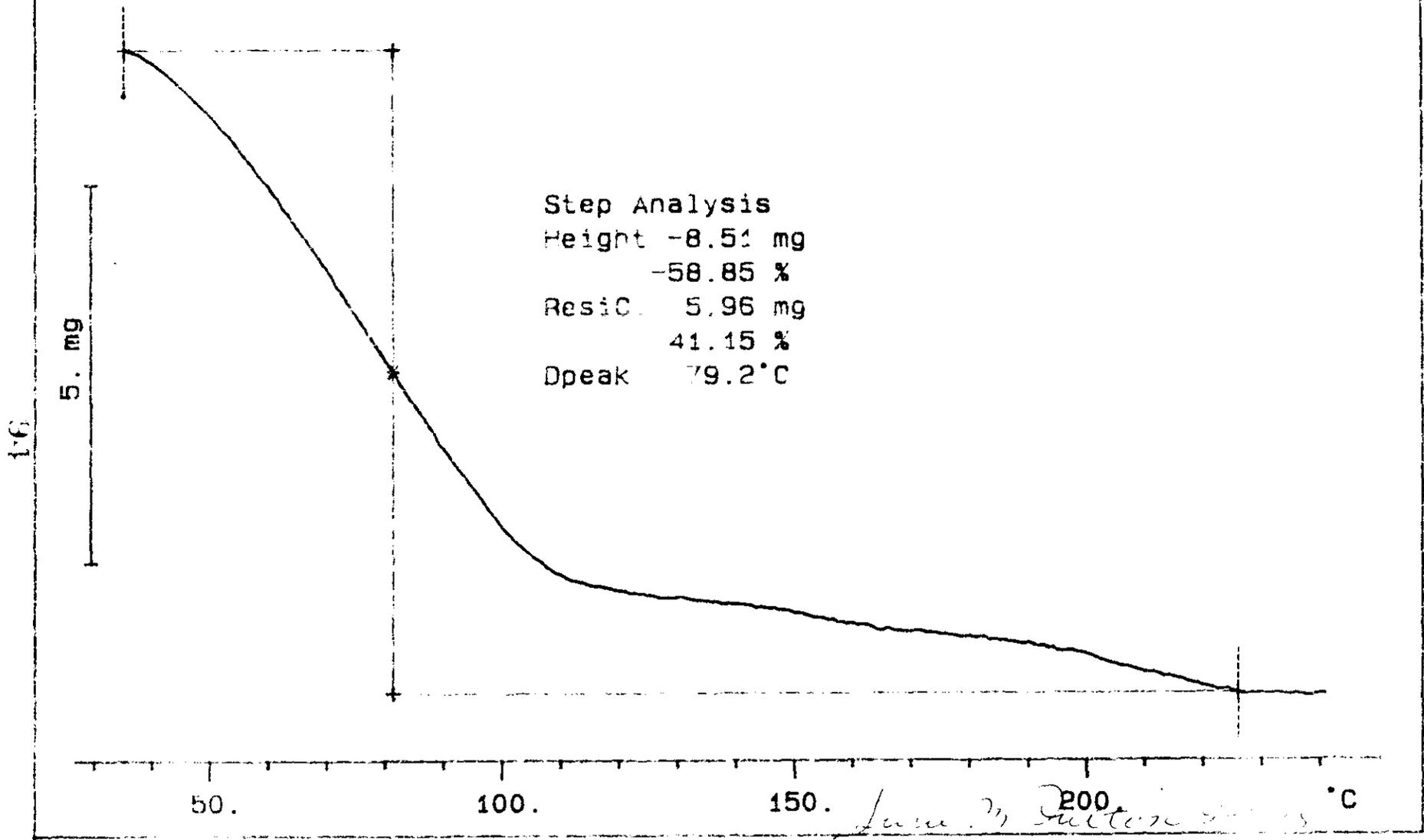
Rate: 10.0 °C/min

File: 00021.001
Ident: 0.0

TG METTLER 30-Apr-95
222-S Laboratory

Step Analysis

Height -8.51 mg
-58.85 %
Resid. 5.96 mg
41.15 %
Dpeak 79.2 °C



WHC-SD-WM-DP-110, REV. 0. (10)

NOT AVAILABLE COPY

S95T000632 N2

35.347 mg

Rate: 10.0 °C/min

File: 00028.001

TG

METTLER

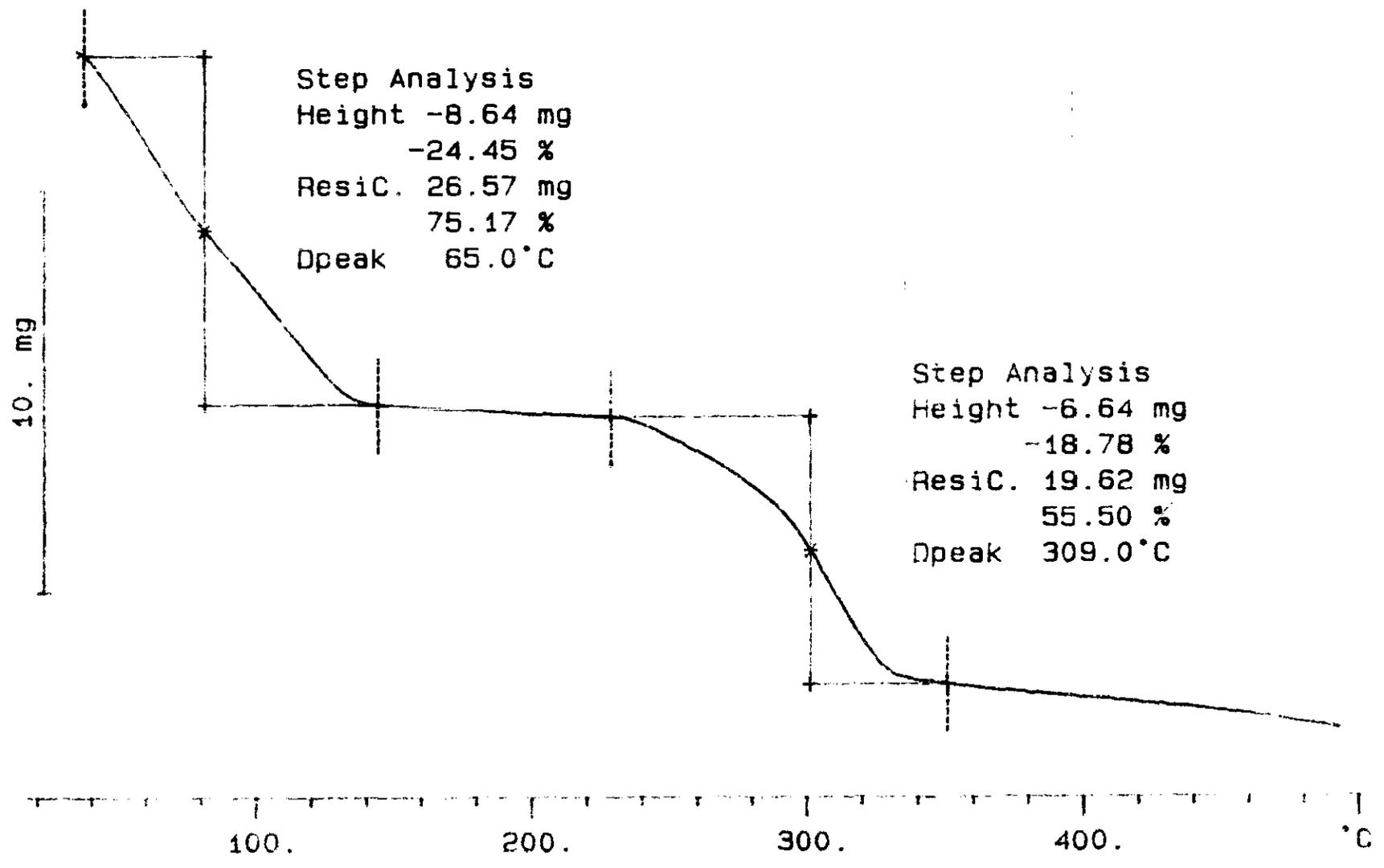
01-May-95

Ident: 0.0

222-S Laboratory

Step Analysis
Height -8.64 mg
-24.45 %
ResiC. 26.57 mg
75.17 %
Dpeak 65.0 °C

Step Analysis
Height -6.64 mg
-18.78 %
ResiC. 19.62 mg
55.50 %
Dpeak 309.0 °C



36

WHC-SD-WM-DP-110, REV. 0

NOT AVAILABLE COPY

S95T000632 (DUP) N2

22.493 mg

Rate: 10.0 °C/min

File: 00030.001

TG

METTLER

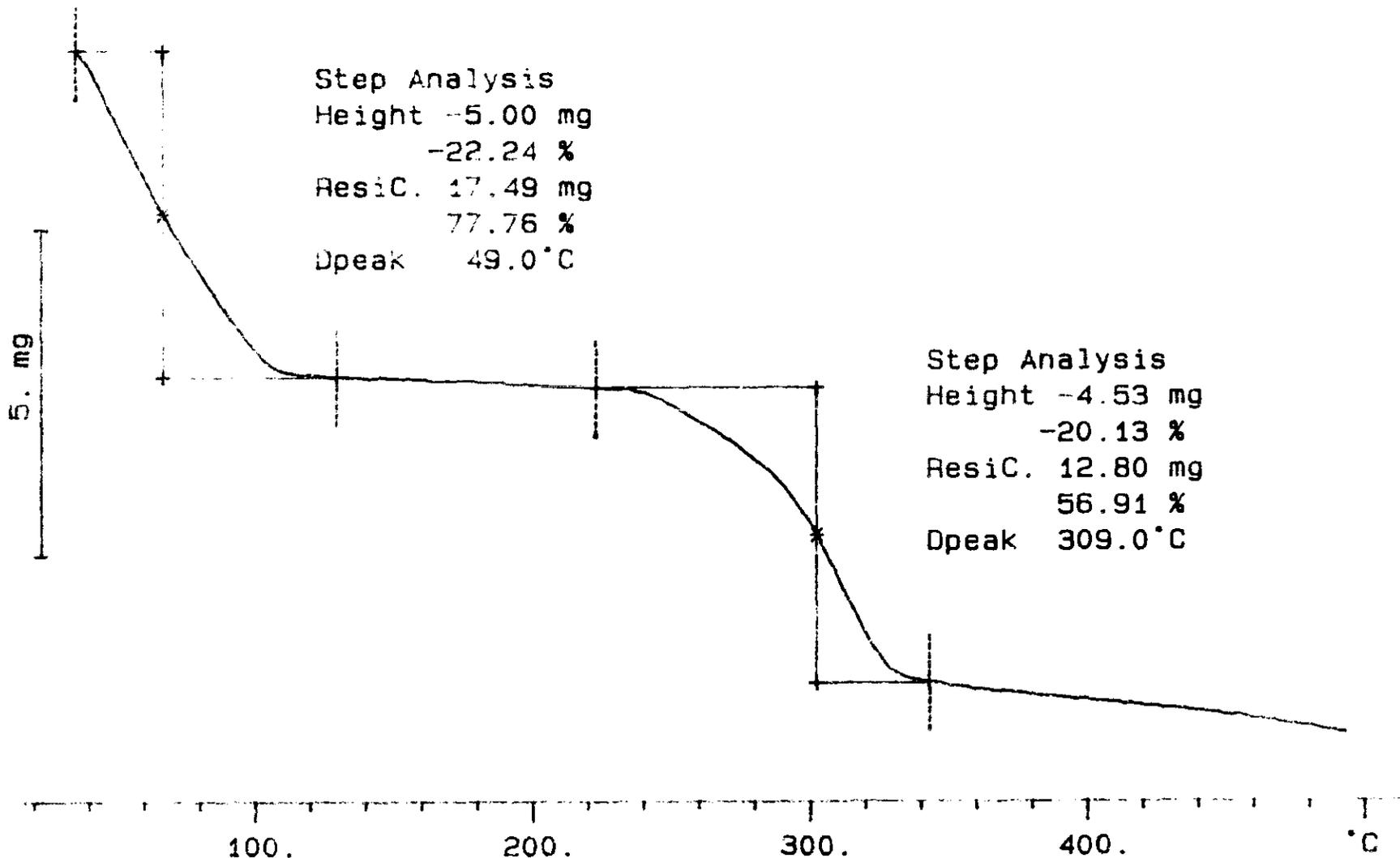
01-May-95

Ident: 0.0

222-S Laboratory

Step Analysis
Height -5.00 mg
-22.24 %
ResiC. 17.49 mg
77.76 %
Dpeak 49.0 °C

Step Analysis
Height -4.53 mg
-20.13 %
ResiC. 12.80 mg
56.91 %
Dpeak 309.0 °C



96

WHC-SD-WM-DP-110, REV. 01.2.198

LABCORE Data Entry Template for Worklist# 1052

Analyst: SME **Instrument:** TGA01 **Book #** 42NE A

Method: LA-560-112 Rev/Mod A 2

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.47</u>	N/A	%
95000052	U-202	2 SAMPLE	S95T000643	0	TGA-01	SOLID	N/A	<u>36.24</u>		%
95000052	U-202	3 DUP	S95T000643	0	TGA-01	SOLID	<u>36.24</u>	<u>41.52</u>	N/A	%
95000052	U-202	4 TRIPL	S95T000643	0	TGA-01	SOLID	<u>36.24</u>	<u>34.81</u>	N/A	%

Final page for worklist # 1052

See attached for signatures 5-1-95
Analyst Signature [Signature] **Date** 5-1-95

Verified by
[Signature]
Analyst Signature [Signature] **Date** 5-1-95

Data Entry Comments: 015T000643 produced a second weight loss step of 0.5% at 303°C.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 1052

Analyst: SWF Instrument: TGA01 Book # 412N'S-A

Method: LA-560-112 Rev/Mod A

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
95000054	U-202	2 SAMPLE	S95T000610	0	TGA-01	SOLID	N/A			%
95000054	U-202	3 DUP	S95T000610	0	TGA-01	SOLID			N/A	%
95000052	U-202	4 SAMPLE	S95T000643	0	TGA-01	SOLID	N/A			%
95000052	U-202	5 DUP	S95T000643	0	TGA-01	SOLID			N/A	%

Final page for worklist # 1052

Susie M. Fulton 4-1-95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

S95T000610 - duplicate
S95T000643 - slight yellow, mottled w/ large crystals
(> 50% crystals)

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slqt Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 99 TO 102.

TEST ANAL. 1007.

TGA STD 42N8-A

14.470 mg

Rate: 10.0 °C/min

File: 00021.001

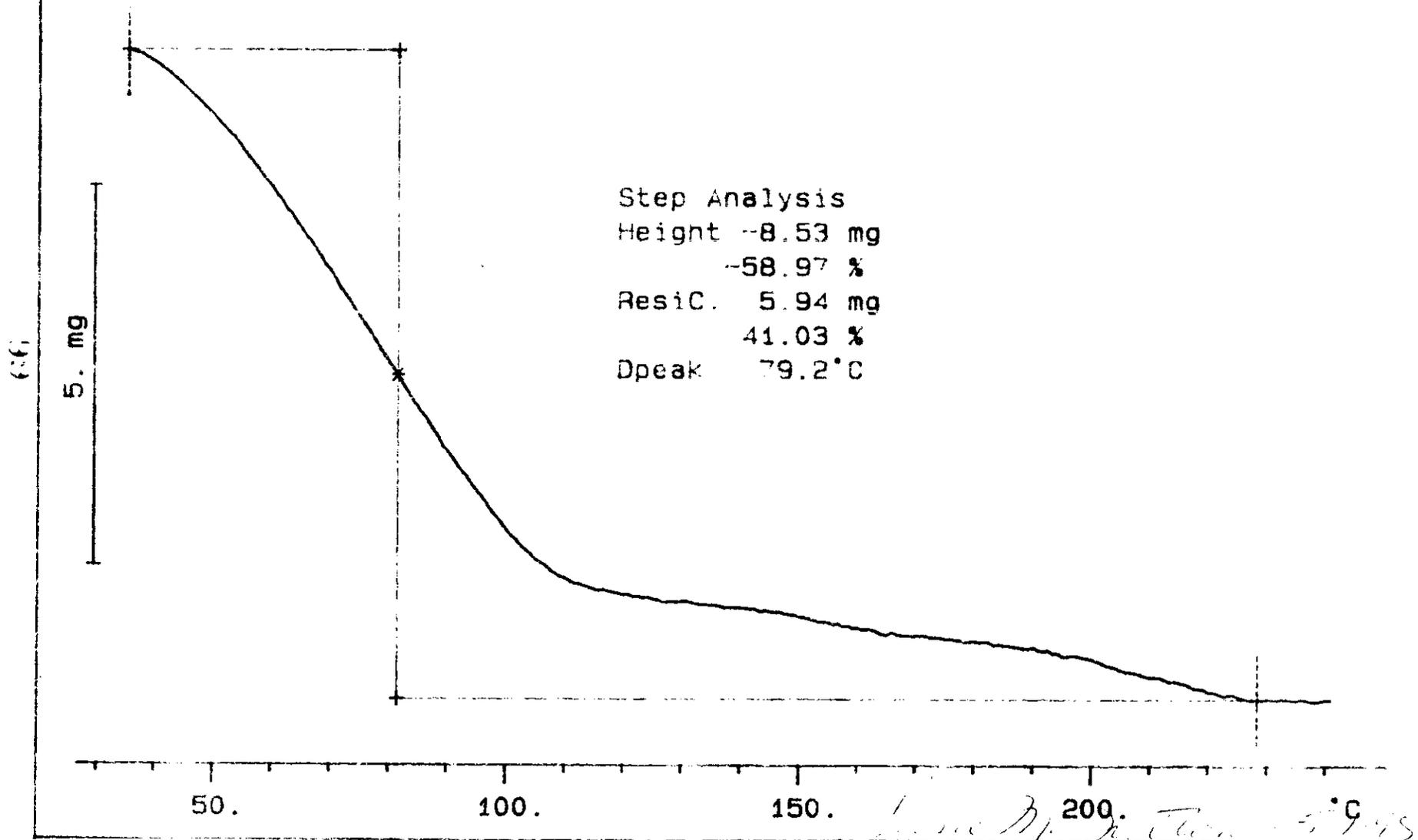
TG

METTLER

30-Apr-95

Ident: 0.0

222-S Laboratory



WHC-SD-WM-DP-110, REV. 0

NOT AVAILABLE COPY

S95T000643 N2

39.426 mg

Rate: 10.0 °C/min

File: 00023.001

TG

METTLER

30-Apr-95

Ident: 0.0

222-S Laboratory

100

10. mg

Step Analysis

Height -14.29 mg

-36.24 %

ResidC. 25.14 mg

63.76 %

Dpeak 135.0 °C

Step Analysis

Height -3.38 mg

-8.58 %

ResidC. 21.46 mg

54.43 %

Dpeak 303.0 °C

100.

200.

300.

400.

°C

WHC-SD-WM-DP-110, RBM, 0.150

UNAVAILABLE COPY

S95T000643 (DUP) N2

34.703 mg

Rate: 10.0 °C/min

File: 00025.001

TG

METTLER

30-Apr-95

Ident: 0.0

222-S Laboratory

Step Analysis

Height-14.41 mg

-41.52 %

ResidC. 20.29 mg

58.48 %

Dpeak 151.0 °C

Step Analysis

Height -1.35 mg

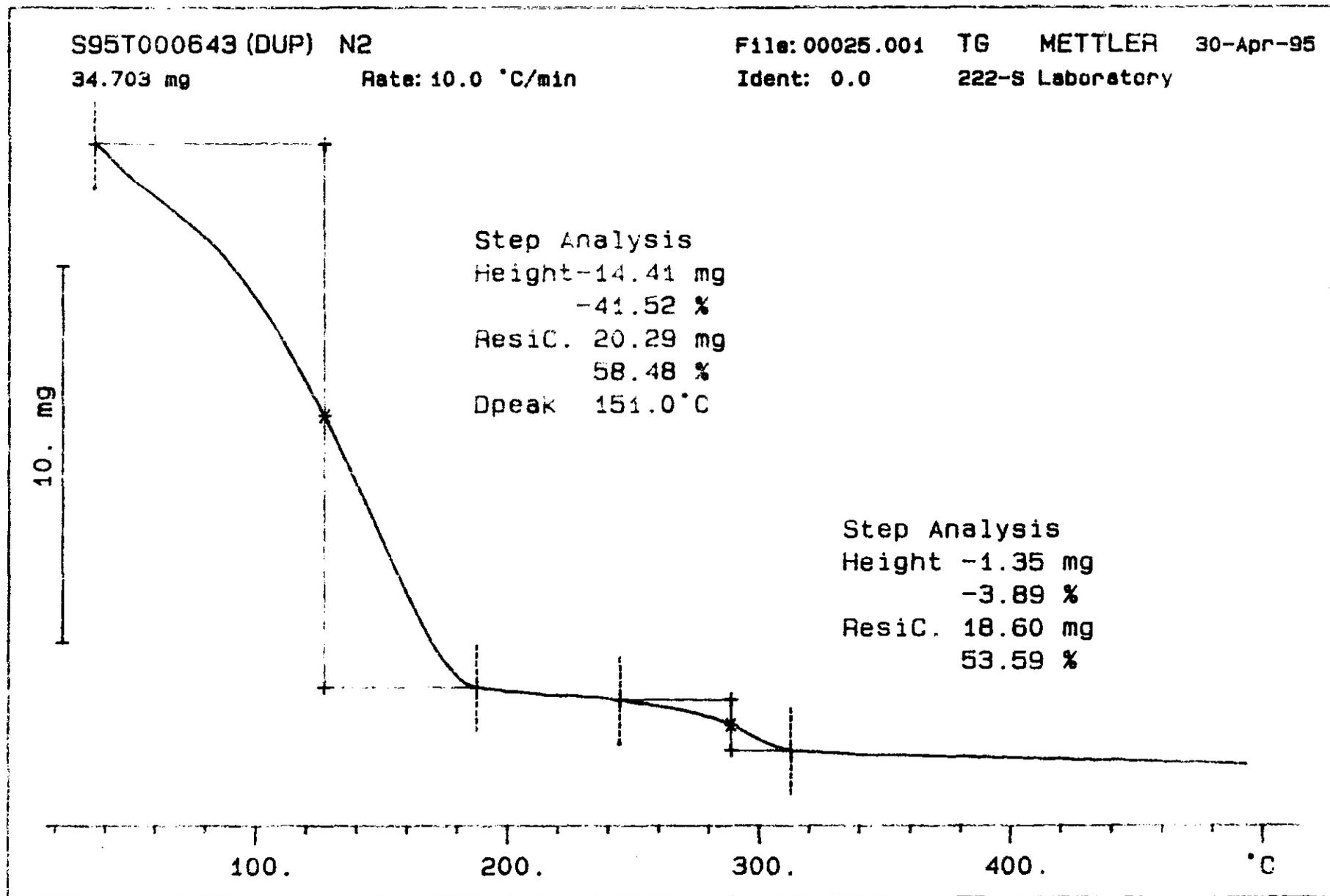
-3.89 %

ResidC. 18.60 mg

53.59 %

107

10. mg



WHC-SD-WM-DP-1:0, REV. 0

UNAVAILABLE COPY

S95T000643 (TRIP) N2

File: 00026.001 TG METTLER 01-May-95

30.171 mg

Rate: 10.0 °C/min

Ident: 0.0

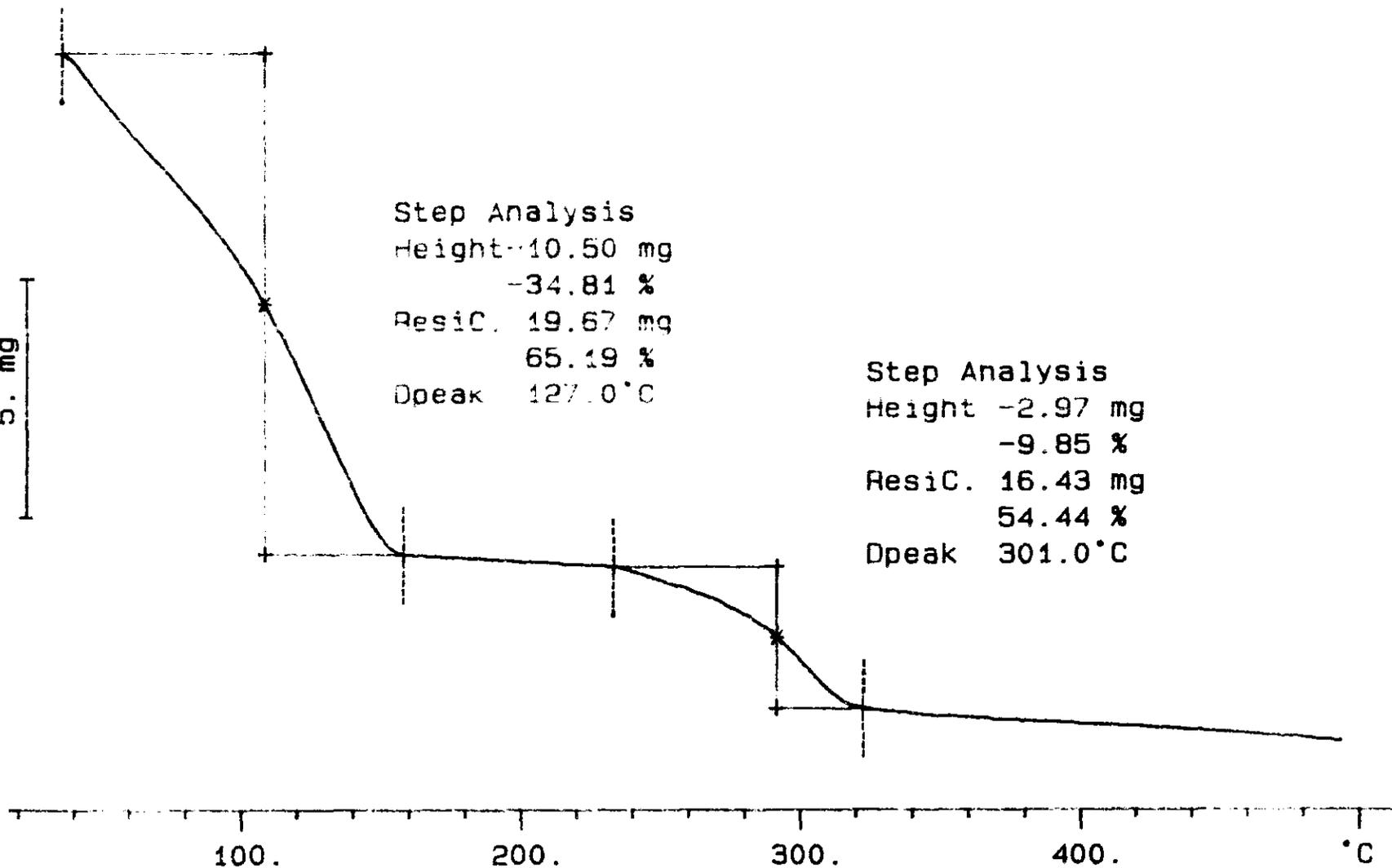
222-S Laboratory

100

5. mg

Step Analysis
Height -10.50 mg
-34.81 %
ResiC. 19.67 mg
65.19 %
Dpeak 127.0 °C

Step Analysis
Height -2.97 mg
-9.85 %
ResiC. 16.43 mg
54.44 %
Dpeak 301.0 °C



WHC-SD-WM-DP-110, REV 0

LABCORE Data Entry Template for Worklist# 1053

Analyst: DOS Instrument: TGA01 Book # 4208-A

Method: LA-560-112 Rev/Mod A-7-

Worklist Comment: Please run U-202 TGA under N2 bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA 01	SOLID	<u>59.19</u>	<u>58.40</u>	<u>N/A</u>	%
95000052	U-202	2 SAMPLE	S95T000644	0	TGA 01	SOLID	<u>N/A</u>	<u>24.43</u>		%
95000052	U-202	3 DUP	S95T000644	0	TGA 01	SOLID	<u>24.43</u>	<u>23.96</u>	<u>N/A</u>	%

Final page for worklist # 1053

[Signature] 4-25-95
Analyst Signature Date

[Signature] 4-25-95
Analyst Signature Date

Verified by Blanca Valenzuela 4/25/95

Data Entry Comments: SPK TGA-01 provided a second weight loss step of 1.0% at 377°C

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

BEST AVAILABLE COPY

S95T000644 N2

39.619 mg

Rate: 10.0 °C/min

File: 00031.001

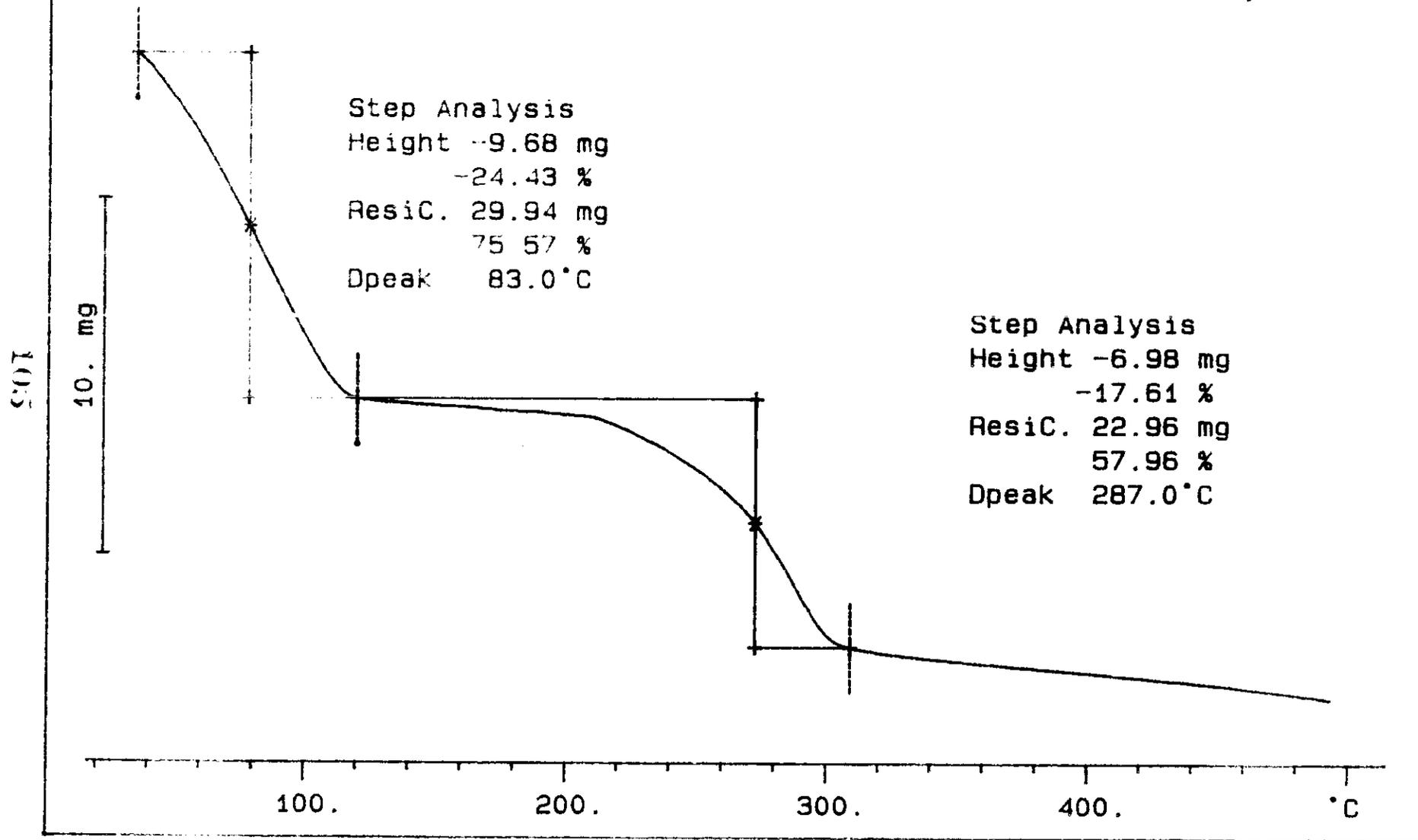
TG

METTLER

24-Apr-95

Ident: 0.0

222-S Laboratory



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S95T000644 (DUP) N2

35.531 mg

Rate: 10.0 °C/min

File: 00033.001

TG

METTLER

24-Apr-95

Ident: 0.0

222-S Laboratory

100%

10. mg

Step Analysis

Height -8.51 mg

-23.96 %

ResiC 27.02 mg

76.04 %

Step Analysis

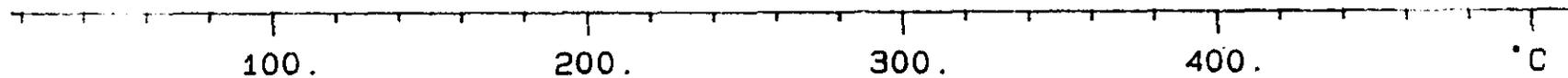
Height -6.43 mg

-18.11 %

ResiC. 20.58 mg

57.93 %

Dpeak 287.0 °C



WHC-SJ-WM-CP-10, REV: 0.1

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176,715M

DISTRIBUTION SHEET

To Distribution	From Characterization Plans and Reports	Page 2 of 2		
		Date:	05/05/95	
Project Title/Work Order WHC-SD-WM-DP-110, Rev. 0, "45-Day Safety Screen Results for Tank 241-U-202, Push Mode, Cores 75 and 78"		EDT NO.:	EDT-612152	
		ECN NO.:	N/A	
Name	MSIN	Text With all Attach	EDT/ECN ONLY	

Washington State Department of Ecology

Single-Shell Tank Unit Manager
S. E. McKinney
P.O. Box 47600
Olympia, Washington 98504-7600

X

Environmental Protection Agency

Single-Shell Tank Unit Manager
D. R. Einan
712 Swift Boulevard, Suite 5
Richland, Washington 99352

X

U. S. Department of Energy

Jim Poppiti
12800 Middlebrook Rd.
Trevion II, EM-36
Germantown, MD 20874

X

Los Alamos Technical Associates

A. T. DiCenso
750 Swift Boulevard
Suite # 4
Richland, WA 99352

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		Date: 05/05/95

Project Title/Work Order WHC-SD-WM-DP-110, Rev. 0, "45-Day Safety Screen Results for Tank 241-U-202, Push Mode, Cores 75 and 78"	EDT NO.: EDT-612152
	ECN NO.: N/A

Name	MSIN	Text With all Attach	EDT/ECN ONLY
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Pacific Northwest Laboratory

J. R. Gormsen	K7-28		X
S. J. Harris	K7-22	X	
K. L. Silvers	P7-27		X

U.S. Department of Energy, RL

C. A. Babel	S7-54	X	
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Westinghouse Hanford Company

J. N. Appel	G3-21		X
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R. J. Cash	S7-15	X	
J. L. Deichman	H4-19		X
G. D. Forehand	S7-31		X
C. E. Golberg	H5-49		X
V. W. Hall	H4-21		X
D. C. Hetzer	S6-31		X
L. Jensen	T6-07	X	
J. Jo	R2-12	X	
G. D. Johnson	G1-19	X	
N. W. Kirch	R2-11	X	
J. G. Kristofzski	T6-06	X	
M. J. Kupfer	H5-49	X	
E. J. Lipke	S7-14		X
N. G. McDuffie	S7-15	X	
J. E. Meacham	S7-15	X	
P. M. Morant	H4-25	X	
B. C. Simpson	R2-12		X
D. A. Turner	S7-15	X	
J. A. Voogd	R4-01		X
Central Files	L8-04	2	
EDMC	H6-08	X	
LTIC	T6-03		X
OSTI	L8-07	2	
TFIC (Tank Farm Information Center)	R1-20		X
TCRC	R2-12	2	

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